

MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

VOL. XI. No. 10.
WEEKLY.

BALTIMORE, APRIL 16, 1887.

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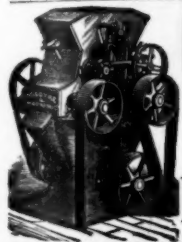
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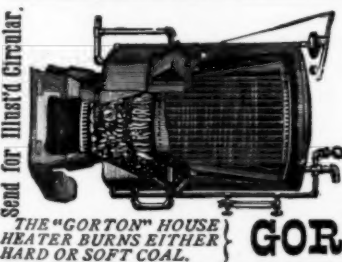
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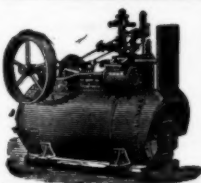
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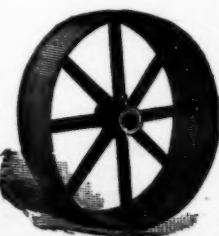
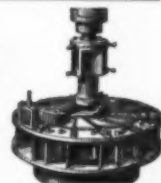
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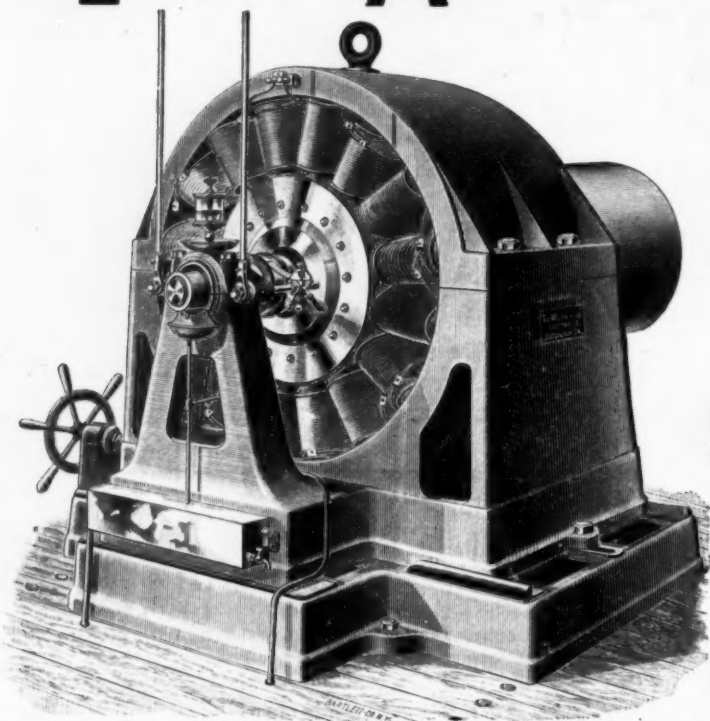
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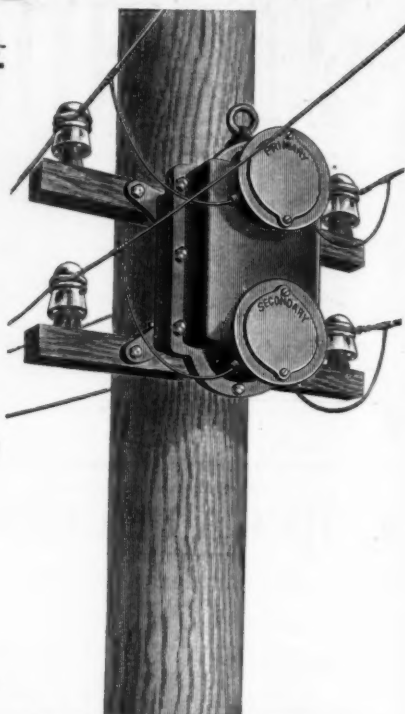
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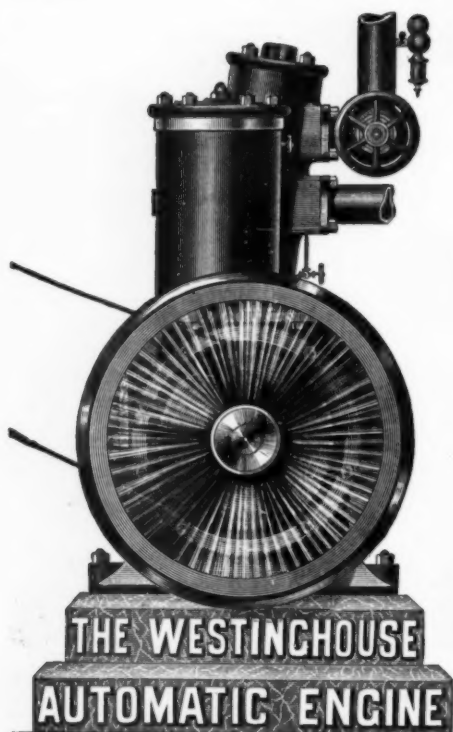
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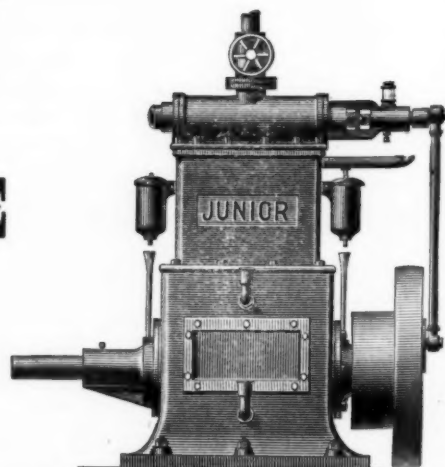
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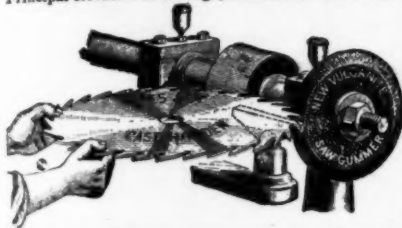
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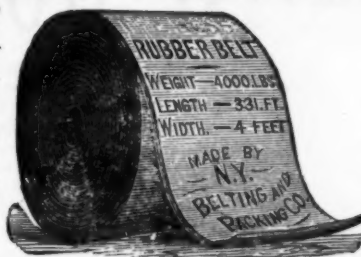


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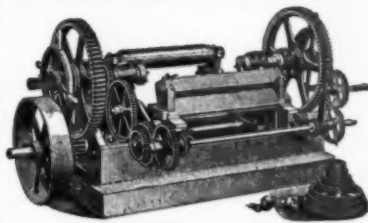
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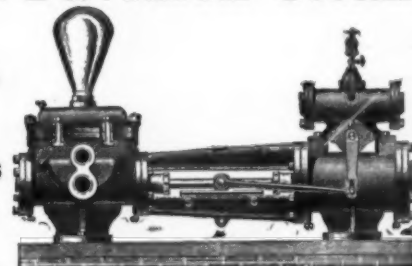
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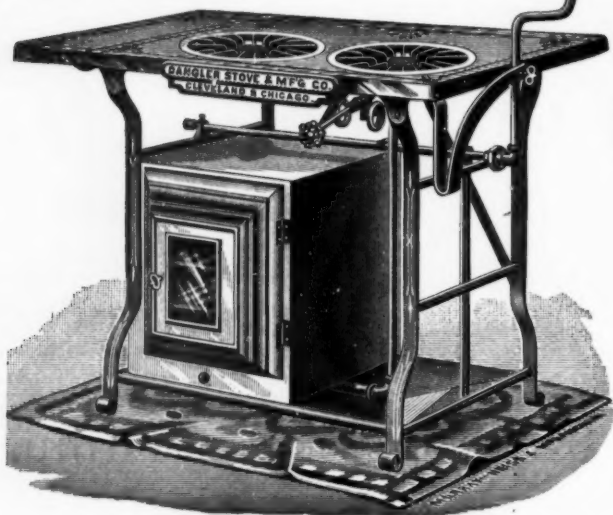
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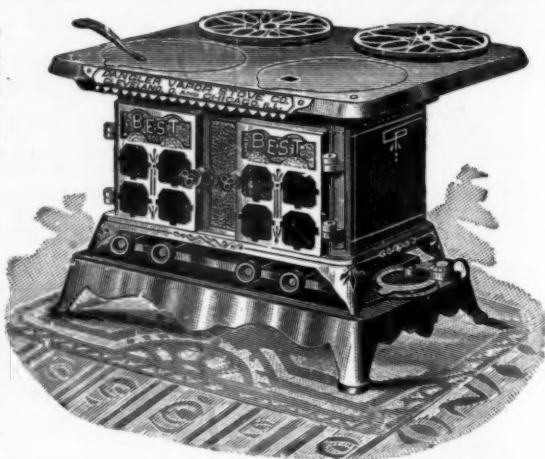


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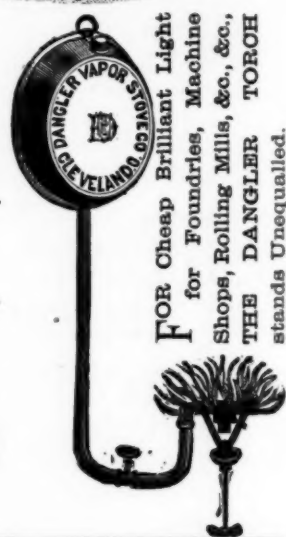
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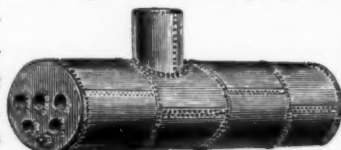
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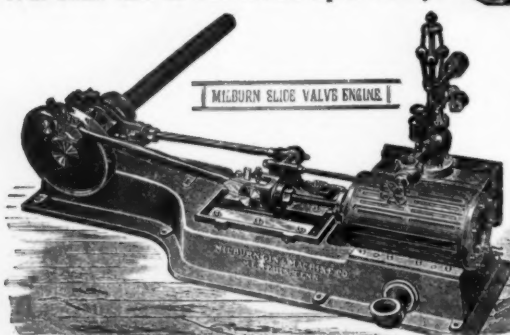
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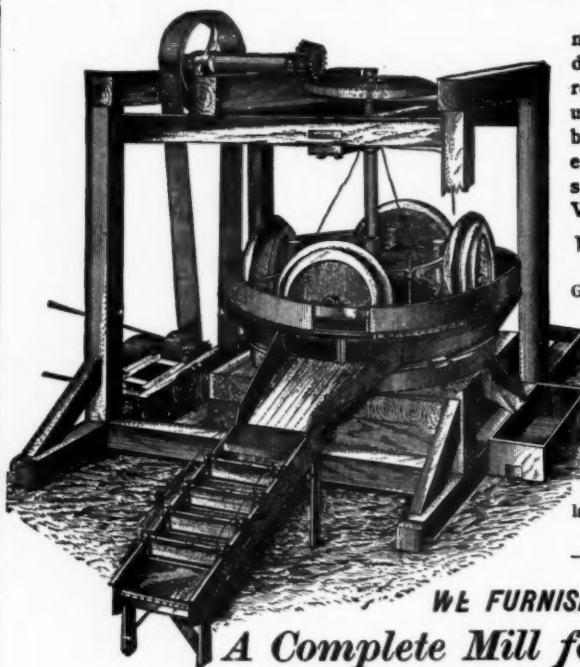
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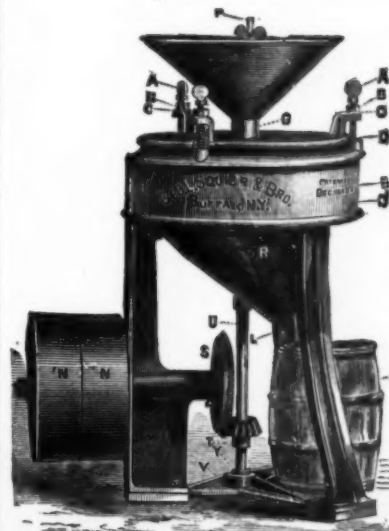
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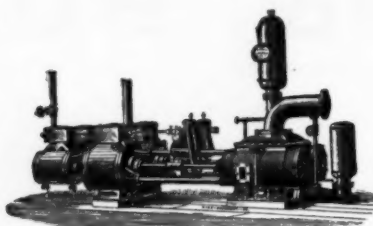
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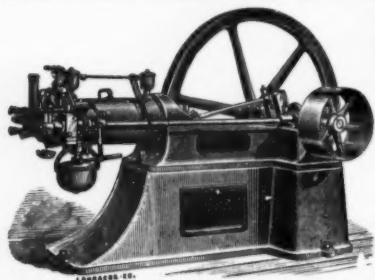
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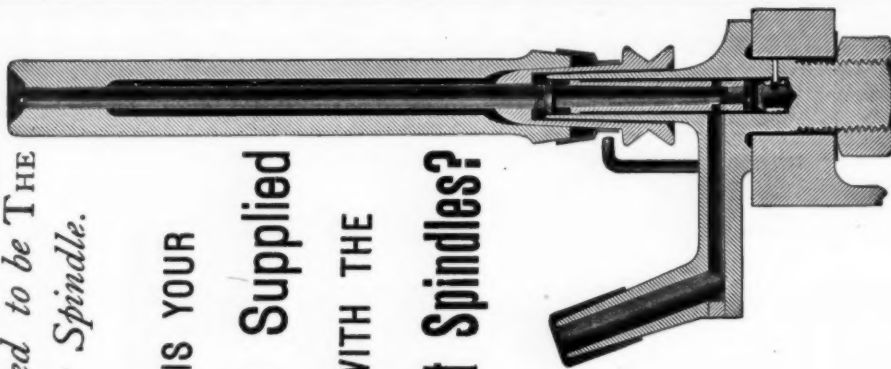
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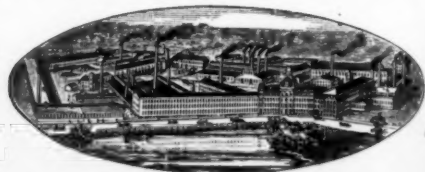
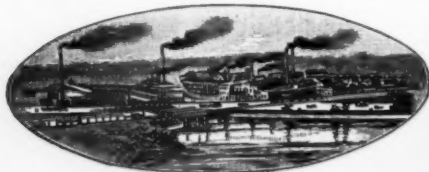
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BALTIMORE, APRIL 16, 1887.

SUBSCRIBERS who do not receive the MANUFACTURERS' RECORD on time or who fail to receive it regularly will please notify us promptly. It is mailed before 3 P. M. on Thursdays, and from this they can tell as to what time it should reach them. During the last five or six months the complaints about the lateness and the non-delivery of this paper, as well as of the Journal of Commerce, also published by the Manufacturers' Record Co., have been so numerous that they have become monotonous. The trouble seems to be in the Baltimore post-office, and while we have made complaints almost without number we are anxious in the interest of our readers to keep up the complaints until there is some improvement in the mails.

As an illustration of the mistakes of the post-office, we received in one mail last Monday eight letters addressed to "The Bradstreet Co.," Baltimore. With one exception these letters were all in envelopes on which the name of "The Bradstreet Co." was printed in large type. The similarity of names between the "Manufacturers' Record Co." and "The Bradstreet Co." our readers will observe is very striking.

SOME of the free-trade papers claim that the farmers are not benefited by the iron development now going on in the South, but the Jasper (Ala.) Eagle says: "It would be a hard matter to estimate the amount of capital that has been brought into our county and invested by strangers during the past year. The farmers are selling off their mineral right and getting out of debt. This is wise, for the crude ore is worth nothing to them, but the developments to follow will be worth a great deal."

MR. F. E. SAWARD, the editor of the Coal Trade Journal, New York, has issued his annual, "The Coal Trade," for 1887. This valuable work is the standard authority on coal statistics of the country, and to all interested in coal it is of great value and interest. It contains nearly 100 pages.

More Buildings Needed in the South.

From all the growing industrial centers of the South there comes a demand for more buildings, dwellings especially being in urgent need. People are crowding into these towns rapidly, but in some places it is almost impossible to secure a dwelling at any price. The companies that are giving their attention to the building up of the industrial interests of these places seemed not to have made adequate provision for supplying the demand for houses. Mechanics, day laborers and business men generally are flocking to some of these towns, and there is work for them, but they can find no place to live, even temporarily. Unless there is a change and more attention is given to the erection of dwelling-houses, there will be very serious trouble. With houses in such demand as at present, rents will be advanced to such a point as to force people of ordinary means to leave, and thus the manufacturing establishments may find it difficult to keep their workmen. These points are very strongly emphasized in a letter from Decatur, from which we take the following extracts:

The present demand could not be supplied if 1,000 houses could be built in a day. Men are arriving on each of the eight daily trains who want to locate, and the getting of houses is the great trouble. When a house or a dozen houses are begun they are rented before a nail is driven at a grand rate of interest for the builder. * * * It is impossible to get accommodations. Many of the residents are taking private boarders, but do not by any means accommodate all who seek such entertainment. The hotels are all crowded, and a man can often only get a bed after the one occupying it is up for breakfast or to leave on the train. The crying need is for buildings, for houses, for homes, and a man or a company that will build 100 or 1,000 houses here can rent or lease them at excellent profit before a nail is driven.

The Decatur Land Improvement Co. are, we understand, taking vigorous steps to aid in the building of houses. In Anniston, according to the papers there, not a vacant house is to be found, and while the Anniston City Land Co. are building quite a number, we suppose at least 1,000 houses must be put up there during the next 7 or 8 months to accommodate the increase in the population that is positively assured by new industries on which work has been commenced. Chattanooga, according to a press dispatch, is suffering from the lack of dwellings, and the same is true at many other places.

The business men of these cities ought to devote their attention to this matter without delay, and not leave it to private parties to erect buildings enough to meet the demand. Builders of portable houses ought to do a fine business in the South now. There are some establishments where complete houses, from the small movable structures for railroad builders to the well-planned and well-made house costing several thousand dollars, are turned out complete. An entire house

in "knock down" shape can be purchased ready for putting together. These houses can be had already painted if desired. By purchasing these ready-made houses and by aiding contractors and others to build, it ought to be possible to overcome the house famine now prevailing in some places.

The Interstate Commerce Bill.

It is greatly to be regretted that those who in their fanatical efforts to hamper and restrict the railroad interests of the country and thus to upset all business matters, cannot be made to suffer in themselves the accumulated damage to the country caused by this unwise legislation. Unfortunately, however, the evil that men do cannot be confined in its effects upon those who do it, but the innocent must also suffer. In this case, Congress or rather a majority of the members carried away with the idea of increasing their popularity, have forced upon the country a bill which even its own authors do not understand, and which, by unsettling all business matters from one end of the country to the other, has already caused an immense aggregate loss which must daily increase in volume. Probably Congress never gave a better illustration of its power to do evil than in the passage of this bill.

The agrarian sentiment which has been developed in many parts of the country of late years, which would seek to destroy all corporations and which has been especially hostile to railroads, instead of meeting opposition from those who ought to be safeguards, has been encouraged by demagogical politicians, until it became possible to force such a measure as this nondescript Interstate Commerce Bill through Congress.

The railroads have been the mightiest power in the vast development of the West and South, enriching the country by untold millions and making possible the giant strides that we have seen in these two sections. And yet it is from these portions of the country that the clamor against railroads has been the greatest. The South has already learned the power for evil, of the child that it so tenderly nursed, and instead of regarding with favor the workings of this bill, which we regret to say had so many supporters in that section, it has already sought relief from its power by an appeal to the commissioners for help. It is possible that there will soon come a reaction that will force the repeal of this bill, but in the meantime the country must suffer.

The MANUFACTURERS' RECORD has persistently fought every attempt to throttle the railroads of the country by unjust laws, and it has labored without ceasing to show the immense damage to the South from the railroad commissions that have from time to time been established in the different States, but wisdom, it seems, can only be learned by experience,

and the South, as well as the rest of the country, will now learn by sad experience that in attempting to destroy the property which the government ought rather to protect, it has done immeasurable harm to all business interests. It is to be hoped that this bill will soon be brought before the Supreme Court of the United States, for we feel quite certain that at least some of its provisions will be pronounced unconstitutional.

Statistics Needed.

Our first issue this month contained an editorial with the above caption, which has received considerable attention and brought to us, among other valuable matter, a small pamphlet entitled "A national need and its business supply." This is a reprint of an interesting contribution from Mr. Clarence Gordon, of New York, which first appeared in the Manhattan Magazine in July, 1883. The subject discussed was "the necessity of instructing emigrants," and of "informing their leaders and advisers in the primary knowledge of their important work." "Such an education," Mr. Gordon wrote, "can come to the actual emigrants only through their superiors, who, with opportunity and intelligence to receive and digest the principles and facts that should be, but are not at command, could then convey instruction pertinent to individual needs and ability." In writing the foregoing Mr. Gordon had in mind the foreign poor emigrants who, he quaintly says, "need shepherds, not a lexicography." Five and a half millions of this class arrived in the United States in the fifteen years preceding January 1, 1883. These large figures "represent only the number of individuals that cross from the Eastern-hemisphere to the Western. The money capital they bring is small relatively; the amount of muscle is large. The material and moral seeds they are to sow will be to a degree ignorantly planted in unsuitable soils and climates, and a proportion of tares must be expected to come up." In another paragraph reference is made to the tide of migration that has been sweeping westward from the Eastern States. This "carries with it and draws in its wake an amount of money much larger than that which crosses the seas, * * * and its enterprise born of freedom achieves better results with less cost to the nation." These movements of immigration, whether foreign or domestic, are, says Mr. Gordon, "but fractions of the great integer," the aggregate value of whose other parts it is "difficult to realize or estimate." Among those other parts are the "numerous associations of capital abroad and of the surplus accumulations of our Eastern cities that are seeking" profitable investments. The writer insists that this tide of migration imposes a duty upon the American government or its people. The conduct of our immigration should

"have one mastering principle—the conscience within ruling all action—to protect the immigrant, be that immigrant man, money or idea, for in proportion to the wisdom and righteousness with which the investment is made will be the profit and stability of the resources to be developed."

While the author wrote with especial reference to Western immigration, all his line of argument will apply with equal force to the currents that are flowing into the South. Except Texas, the Southern States have received no considerable number of European emigrants. Their increase of population from without has been derived from States further north. The millions that have been invested in new enterprises or in the enlargement of old ones, when not obtained from local capitalists, have been furnished by investors of the Northern States and of Europe. What grand sum these investments would amount to if their aggregate could be completely ascertained there are no records to show. If, then, good policy and sound principle were blended in the suggestions made in 1883 by Mr. Gordon—and we think they were—how much more necessary it has become that his advice should be heeded now. The proposition that "in proportion to the wisdom and righteousness with which the investment is made will be the profit and stability of the resources to be developed," cannot be controverted.

In 1879 Mr. Gordon, in one of a series of articles in the New York Evening Post, submitted the idea of establishing in New York city a bureau of information in connection with a publication, the two to collect and disseminate the results of special researches made by honest and practical men, and the former "to conduct all migration affecting this country and those between which it courses." This bureau was to be a business enterprise, with ample capital at its command, and to be managed by wealthy and public-spirited men. The plan was warmly endorsed by many such, but it never crystalized into corporate form. In 1882 a petition was addressed to President Arthur in which, among other requests, was one asking him to call the attention of Congress to the necessity of establishing a bureau in the Department of the Interior, with branches in each of the principal ports of this country, for giving information to immigrants in regard to the soil, climate, resources and conditions of industry of the several sections of our common country." After stating briefly the need of such a bureau, the petition ended by saying: "If such a bureau should be established the New South may share with the North and West in its great benefits."

The petitioners and our author had followed closely the same lines of thought and have reached the same conclusion. All were thinking mainly of protecting foreigners who might

come to our shores, and of so distributing them through the whole country as that all might be benefited and none injured. The proposition made by Mr. Sperry, as related in our former article, had even greater breadth and significance, for the bureau he advocated was to be a daily adviser of the conditions and prospects of all the principal industries of the country. Such a bureau would inure to the advantage of all, whether old citizens or newly arrived immigrants. It would also furnish a reliable basis upon which industries could be established and advanced. It lacked the protection to immigrants that formed part of Mr. Gordon's plan, but aside from that it covered all other ideas of both that and the petition, and seemed to have been the legitimate outgrowth of the two. It called for statistics that, if compiled, would answer every need, and be in a sense the safeguard of all interests.

A Wise Move.

Some of the leading business men of Nashville have organized a Bureau of Information, with a view, not to individual profit, but to advance the interests of the city. This bureau will give without charge any desired information as to Nashville and its advantages as a commercial and manufacturing point. This is just what is needed in every live city in the South. Manufacturers and others desiring to move South are constantly seeking information as to the advantages of different locations, and in many of the cities of the South, even some of the most progressive ones, there is no one whose business it is to answer such inquiries, and as a result this work must often be done by real estate agents, or not done at all. Nashville's example may be followed with great profit by many other Southern cities and towns.

WITH last week's issue the Winston (N. C.) Sentinel began its fifth year under its present able management. While giving great attention to collating the news of its immediate section, the Sentinel always contains admirable condensations of happenings all over the State, as well as excellent summaries of foreign and domestic news. The ruling passion with the editor appears to be the development of the many resources of the old North State.

THE production of pig iron in this country is now about 137,000 tons a week or greater than ever before. The American Manufacturer estimates the total output for the first three months of 1887 at 1,668,036 tons.

THE value of the foreign iron and steel imported into the United States during February was \$4,502,735, against \$2,763,093 for February, 1886, or just about double.

Progress in South Carolina.

We do not know what will become of our valued contemporary, the Wilmington Star, now that the Charleston News and Courier has abandoned the claim of the South's growing poorer by reason of the tariff. The Star, the News and Courier and the Courier Journal, in their devotion to free trade, could not be brought to see that the South was becoming more prosperous; manufacturers might be increasing they would readily admit, but the poor farmers! how they were suffering, with every year finding them in worse condition, and all on account of that awful tariff. The News and Courier, unable any longer to represent South Carolina to the world as growing poorer, has now turned around and is setting forth in strong colors the increasing prosperity of that State. Will our friends of the Star still refuse to turn, or will they continue to proclaim that North Carolina is yearly becoming poorer. It is only when the News and Courier wants to show how disastrous the tariff is to the South, that it takes the side of increasing poverty, but we imagine that it will even abandon this, now that it has determined to show how much South Carolina is prospering. Discussing the complaints of the chronic grumblers about South Carolina's progress the News says:

"From one year's end to the other they complain about 'poor old South Carolina,' while they close their eyes to the evidences of progress which may be seen on every hand—the whirling machinery of new cotton mills; the rush of railway trains through country which has just been redeemed from the wilderness; the towns that have been built in cotton fields; the banks that have been established; the colleges and schools and churches that dot the landscape from the mountains to the sea.

But in spite of all that the grumblers are doing to retard the progress of the State, South Carolina is moving along towards the head of the procession, and every field of enterprise is holding her own. It is gratifying to see that there are some who still have faith in the future of this proud old Commonwealth, and that the spirit of small capitalists has been touched with the fire of progress.

* * * The effect of this everlasting complaining and grumbling must necessarily be injurious to the State. It prevents immigration, drives away capital, discourages home industry and home enterprise, prevents the profitable development of our splendid natural resources, and keeps us in the background while our neighbors, who are poorer than we, are forging ahead in the race of Southern progress. It is time to change our tune from a funeral march to a quick-step, and to send all grumblers to the rear. We have already followed them too far, and at every step they have led us deeper and deeper into the wilderness. But, in spite of all that they have said, in spite of all their evil prognostications, we are as well off to-day as any other of the Southern States, and by earnest, united efforts we can make the future all that we would have it to be.

In order, however, to accomplish anything it is necessary first that we should cease complaining and flinging mud on ourselves, and go to work with a heart for any fate. South Carolina has made wonderful progress since the war. Since 1876 its advance has been almost miraculous. We have built factories, opened mines and constructed

railroads; flourishing towns have sprung up in all parts of the State; our agricultural methods have been steadily improving; we can raise more corn and cotton to the acre than ever before in the history of the State; there is a wider and more general distribution of wealth than there was ten, twenty or fifty years ago; our credit is good in spite of our alleged poverty, and the resources of the State are better understood and appreciated than they have ever been before.

We have had a succession of bad crop years—other States have fared no better. We have been cursed since the war by Radical Government, the effects of which we still feel—other States have suffered in the same way. We find it hard to make both ends meet—other people in other States have the same difficulty. But if we sit down and nurse our poverty we will be no better off ten years hence than we were ten years ago. If we neglect or refuse to help ourselves, it is certain that no one will volunteer to help us.

One of the most encouraging signs of the times is the large number of savings banks that have been organized in the State. During the past five or six weeks, State banks, with savings departments, have been projected or established at Blackville, Aiken, Barnwell, Orangeburg, Cheraw, Camdem, Spartanburg, Greenwood and Florence. At the last session of the legislature two new savings banks in Charleston were chartered. One of these banks has been organized and is in successful operation. The banks which have been organized in other parts of the State have started or will start under the most favorable auspices, and there is no doubt that they will all make money. In order that they shall be able to make money it is necessary that there should be money in the country, or there would be no room and no business for the banks. The fact that the people are beginning to save their earnings is the best evidence that they are not so desperately poor as the grumblers would make it appear, and the fact that they have any money to save is undoubted proof that they are making headway in spite of all the clamor of those who are continually crying 'hard times.'

We commend these facts to the attention of those who insist that it is only in manufactures that the South is progressing. South Carolina has made less advance in manufacturing of late years than any of the neighboring States, and yet "its advances since 1876 has been miraculous," railroads and factories have been built, mines opened, agricultural methods improved; there is a wider and more general distribution of wealth than even before the war, savings banks are increasing and the people generally are undoubtedly making headway financially. What more could be asked. The News and Courier wields a great power in South Carolina, and if it will only keep on in this line and induce people to stop grumbling and to study to develop the resources of that State, South Carolina will make still greater progress.

THE Sloss Steel & Iron Co., of Birmingham, Ala., have purchased the entire property of the Coalburg Coal & Coke Co. of the same place. The furnace now under construction by the latter company will be pushed to completion and another one will, it is said, be immediately commenced. It has also been determined to build the Reese basic steel plant, for which the Sloss Co. purchased the right some months ago.

An Extensive Coal and Iron Property.

Some Facts of Interest Regarding the Brierfield Land, Coal & Iron Company.

Hon. J. S. Morrill, of the United States Senate, in a letter to the editor of the MANUFACTURERS' RECORD regarding his recent trip to the South, writes as follows:

* * * My visit was too brief and restricted to afford extensive observation of the Southern States, but one evidence of rapidly increasing prosperity is visible in the large additions to their railroads. More and more of the people are able to travel, and the towns which supply freights to railroads appear to have greatly multiplied. The people everywhere seemed to be inspired with courage and confidence as to the future growth of Southern industries, and they point to numerous towns, which are springing up in various places, with commendable pride, especially in Florida, Alabama, Georgia and Tennessee. I stopped a couple of days at Brierfield, Ala., where some five or six Northern men have purchased a large tract of coal and iron land, and which is now under the efficient management of Mr. T. J. Peter. The iron ore here was that selected by the Confederacy as the best to be found for making cannon, and the coal is unquestionably equal to any in the United States. They have been turning out iron from their rolling mill and making nails, and have a new furnace just ready to put in blast. They have railroad accommodations, lime rock and water in abundance, and a large coal and iron development appears inevitable. They have not encouraged the building up of a large town site, but the situation can hardly be regarded as inferior to even that of Birmingham. * * *

The Brierfield Land, Coal & Iron Co's property is situated at and adjacent to the town of Brierfield, in the counties of Bibb, Shelby and Chilton, in the State of Alabama.

The town of Brierfield is on the line of the East Tennessee, Virginia & Georgia Railroad, about 11 miles west of Calera, at the crossing of the Louisville & Nashville Railroad. It is located on the banks of the Little Cahaba river, among the foot-hills of the mountains. Of course, the air is pure, the climate mild, salubrious, and the waters are wholesome and burst from large and numerous springs. The surface is gently undulating and drains into a large and swift-flowing stream. The present population is about 2,000, and composed almost exclusively of the employees of the Brierfield Land, Coal & Iron Co. Here are the general offices and store of the company, rolling mill, with a capacity of 50 tons of manufactured iron per day, nail factory, with a capacity of 15,000 kegs of nails per month, foundry, machine shop, blacksmith shop, pattern shop, coal washer, coke ovens, and about 200 tenement houses. There are also four churches and three good schools.

The land property of the Brierfield Land, Coal & Iron Co. consists of about 32,000 acres of land, of which about 18,000 acres are coal lands, and the remainder iron-ore lands. The company has invested over \$1,000,000 in the purchase of these lands and the improvement of the property. The lands were bought in the spring of 1882 at very low prices, since when the price of lands has increased very largely.

On this property in addition there are nine miles of standard gauge railroad, two new locomotives and 28 new coal cars for use on said railroad; also two coal mines thoroughly equipped with hoisting engines, ventilating fans, steam pumps, miles of railroad, numerous pit-cars and mules, 80 tenement houses and a store building; also a thoroughly equipped modern furnace, with a capacity of 1,200 tons of pig iron per month, several iron mines, iron-ore washers, numer-

ous pit-cars and mules, a large store building and about 50 tenement houses.

The Brierfield Land, Coal & Iron Co. is authorized to build railroads to connect with any railroad or navigable stream of water; can buy or lease any railroad already built; may own, lease or operate any wharves or navigable vessels, and increase its stock as its necessities require.

They are working three seams of coal, each four feet in thickness. These mines are in the pitching seams on the southern side of the Cahaba coal field, and pitch at an angle of 30 to 60 degrees. The first lift is down about 300 feet, and the mine has a capacity of about 500 tons per day. The second lift is down about 700 feet. The seams are flattening, and the coal in all the seams is of excellent quality. That in one seam is unequalled by any bituminous coal in the United States for grate purposes, except the justly celebrated Montevallo coal, which it adjoins. This coal is marketed from the Atlantic to the Mississippi river, and from Nashville to New Orleans.

About two miles north of this seam lie the horizontal seams of coal, which are also on the lands of the company. The following extract was published by Eugene A. Smith, State Geologist:

"My surveys and examinations have been directed especially to the Cahaba fields, which, from their geographical position as the most southern coal in the State, and the most accessible to water communication, and on account of their presenting the greatest variety and, I believe, the best quality of coke easily accessible, will undoubtedly be the center of large industry, and must in the near future become one of the principal coal-producing districts in America."

Brierfield is only 50 miles from Selma, on the Alabama river, which is navigable at all seasons of the year thence to the mouth of the river.

The following is an analysis of the grate coal:

Water.....	0.74 per cent.
Volatile.....	40.12 per cent.
Fixed carbon.....	32.43 per cent.
Ash, a reddish brown.....	6.73 per cent.

The following is an analysis of coking coal:

Water.....	1.01 per cent.
Volatile matter.....	42.06 per cent.
Fixed carbon.....	32.58 per cent.
Ash, light brown.....	3.85 per cent.

The following is an extract from a letter of Prof. Henry E. Colton on coke manufactured in the Southern States, published November, 1886, in the American Manufacturer and Iron World:

"The best coke I have seen in Alabama, and in fact in the South, really I think equaling the best Connellsville and having less ash, is made at Brierfield. * * I regret that I have not an analysis of it, but several foundry men told me that it was the best coke they could get, even better than Pocahontas; and one said that in his cupola 75 pounds of coke melted 500 pounds."

Since the date of the publication of this letter a second washer has been erected. The coal is now washed twice, and the coke produced therefrom is equal to any made in the world.

There are vast quantities of excellent limestone, lying so as to be cheaply quarried, within a mile and a half of the furnace. The following is an analysis of the limestone:

Silicious matter.....	2.58 per cent.
Carbonate of lime.....	95.82 per cent.
Magnesia.....	.85 per cent.

Within one-half mile of the furnace are vast beds of brown hematite ore which are easily mined and cheaply washed, the water to wash which is brought from the Little Cahaba river about one mile distant. The following is an analysis of iron made by this furnace from adjacent ores:

Silica.....	1.89 per cent.
Phosphorus.....	.0197 per cent.
Manganese.....	.0494 per cent.

From this analysis it will be seen that the iron will make steel by the ordinary Bessemer process, which process is at least \$5 per ton cheaper than either the basic or the open hearth process. The following extract

is from an article published on page 83 in volume 12, Nos. 1 and 2 of the Southern Historical Society papers in January, 1884, at Richmond, Va. The article was found among the papers of the late General Gorgas, chief of ordnance of the Confederate States.

"The iron obtained from the brown hematite at the furnace in Bibb county, Brierfield, and from the Shelby works, was admirable, the former being of unusual strength."

And on page 88, the following:

"To these would have been added a foundry for heavy guns at Selma or Brierfield, Ala., at which latter place the strongest iron in the country was produced."

At Ashley, on the East Tennessee, Virginia & Georgia Railroad, 3 miles west of Brierfield, are works making a fire-brick of excellent quality.

The Advantages of a Tennessee Town.

[Special correspondence MANUFACTURERS' RECORD.]

KINGSTON, TENN. April 9, 1887.

Realizing the fact that in the regeneration now going on in the South, no journal has rendered more material aid, or has extended a more ready or helping hand, than has the MANUFACTURERS' RECORD, I turn to it for assistance in giving to those who may be thinking of coming to this land of promise a few points which may be of interest to some of them.

This old town, one of the oldest in East Tennessee and once the capital of the State, is situated at the junction of 3 rivers—Emory, Clinch and Tennessee—the latter 2 of which are navigable all the year, and from the location of the town and by reason of its surroundings it is destined to become the key of East Tennessee. It is a town of about 1,000 people. It is about 750 to 800 feet above the sea, is situated on slightly rolling ground, with beautiful hills surrounding it on almost all sides. The rolling ground keeps the town well drained, and, though situated on the river, it is well above high water. Socially our city offers a pleasant home to those who may wish to come among us. We have Presbyterian, Methodist and Baptist churches; and the Rittenhouse Academy, with a full and able corps of teachers, offers splendid opportunities for education. The hill tops surrounding the city offer the most beautiful sites for residences, the view obtained from them being magnificent. To the north, 15 miles away, rises, blue in the distance, the mountain range known as Walden's Ridge, while on the south the Tennessee winds its way down the valley, sparkling and glistening in the warm glow of a Southern sun. A number of the larger and better class of boats make regular trips between this city and Chattanooga, and we have a daily boat from here to Loudon, 20 miles on the E. T., V. & Ga. Railroad. We also have a daily hack line connecting with the Cincinnati Southern Railway at Emory Gap, 7 miles. Before the advent of the railroads, Kingston was considered quite a metropolis and did a thriving business, but in the rush and bustle of the business of to-day, Kingston's waterways cannot compete with the locomotive. Surrounded by all those natural elements which contribute to the building up of great manufacturing cities it is a marvel to many that she should have been content to spend the precious years in slumber; awakening from which she now looks at the towns around her, but, as with Rip Van Winkle, there is no light of recognition in her eyes, for the "boom" that has passed through the land has changed all these towns and cities in a moment, in the twinkling of an eye.

Kingston is so situated as to command vast resources of native wealth. Almost at our doors are vast beds of the very finest coking coal which passes us on the Cincinnati Southern Railway at a distance of only 7 miles; and but a few miles up Clinch and Emory rivers lie immense beds of fine coal. Down our 3 rivers come the raftsmen from the mountains above us, with their rafts of walnut, cherry, pine, oak and poplar on their way to Chattanooga. These men would gladly dispose of their logs here, and thus save themselves the extra distance of 200 miles. We have a large saw mill, owned and operated by Hon. C. B. French, that manufactures lumber of such superior quality that there is a good demand for it even as far away as the Atlanta market, yet but a very small per cent. of the logs that reach us can be handled here at present. To the south of us lie the vast beds of red hematite iron ore. This ore is of the very best quality, and is being mined on a large scale by a half dozen firms, and shipped to Rockwood, Dayton and Chattanooga. Thousands upon thousands of tons of this ore are being shipped right from our doors to aid in building up other towns around us that are surrounded by nothing like the advantages possessed by this place. The ore lies so close to us and reaches the river only 2 miles from the city that only the absence of railroad transportation has kept Kingston from being, long ago, one of the largest iron-producing cities of the South. Situated in the midst of as fine an agricultural district as can be found in East Tennessee, with inexhaustible beds of iron ore at hand, with unlimited supplies of fine coking coal almost at our door, with limestone all around us and with water transportation, our only drawback has ever been the absence of railroad transportation. To this fact our city seems to have awakened, a new life seems to stir in the veins of the people, and they will not in the future be satisfied to see the tide of immigration passing by on the other side. They have had a survey for a narrow gauge railroad to run from here to the Cincinnati Southern Railway at Emory Gap, 7 miles, and the estimated cost of the road, ready for the rails, was \$13,000; but, in the spirit of progress which now animates this people, they are not content with the plan of building a narrow gauge. Our people want iron works established here, and will give any responsible firm that will build a furnace here and operate it sufficient ground for the works, including a building and machinery (once used in manufacturing steel) located on the river front; and to anyone who will build and operate a standard gauge railroad over the line of survey mentioned they will give the charter, survey papers, right of way and \$12,000. Parties who are interested will on the building of this road establish a furniture factory in this city. This will bring us about 40 families, as these people will want to handle their material from the log.

There are two other industries now considering a location here, a flouring mill and a distillery, a favorable decision probably depending upon the building of our Kingston & Emory Gap Railway. That these enterprises would be a success can be easily seen when one looks at the position that Kingston occupies to the rest of this district. Surrounded by a rich farming country, the bulk of whose products are now shipped to other cities, and, by our position on the rivers, being able to command a large portion of the immense crops of corn and wheat produced in Powell's Valley, we are much better able to successfully operate such industries than other cities of East Tennessee.

There is a spoke factory here, with machinery complete, a controlling interest in which is owned by Cincinnati parties, who, having turned their attention to points nearer home, will dispose of their property here to parties who may wish to purchase. Let some firm that is engaged in the iron trade examine the advantages of a location here, accept the two propositions offered herein, and I am satisfied they will have a location and facilities for their business that cannot be equaled in the South.

If, with the assistance of the MANUFACTURERS' RECORD, we succeed in attracting due attention to these hitherto locked-up treasures and thus cause their development, the knowledge of their wonderful richness will ring out to an astonished people, a great city will spring up, furnishing labor to thousands of families, and thus the MANUFACTURERS' RECORD will be the means of bringing prosperity to many, many people, as well as rendering great aid to the manufacturing interests of our country.

S. ELY FRANKLIN.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

Alpine.—C. D. Morrison is erecting a saw mill.

Alpine.—R. E. Cook and J. J. Sawyer will start a saw mill soon.

Asheville.—A new grist mill will be built by W. Riley.

Athens.—W. H. Sykes contemplates building a cotton warehouse, 80x330 feet.

Bessemer.—The Kansas City & Gulf Railroad Co. will build a branch road from Ensley City to Bessemer, and have let the contract to J. W. Worthington & Co.

Bessemer.—It is stated that a company has been formed to establish steam brick works.

Bessemer.—A steam laundry will be started.

Bessemer.—The Bessemer Foundry & Machine Works have been organized with a capital stock of \$25,000. Mr. E. A. Burke, of New Orleans, La., can probably give particulars.

Bessemer.—The De Bardeleben Coal & Iron Co. have lately purchased about 50,000 acres more of mineral land, and will build two more iron furnaces and 300 additional coke ovens. Each furnace will be 17x75 feet.

Birmingham.—The report last week that J. A. Montgomery is negotiating for the location of car works at Leeds is not confirmed.

Birmingham.—The Alabama Great Southern Railroad (office Cincinnati, O.) will move their machine shops from Chattanooga, Tenn., to Birmingham.

Birmingham.—The Morrow Mining Co., capital stock \$140,000, has been incorporated by John C. Morrow, W. A. Walker, Jr., and George M. Morrow.

Birmingham.—Leonard, McPoland & Nalls, of Montgomery, have received the contract to erect a large six-story building for Thompson & Painter.

Birmingham.—The Edison Electric Illuminating Co. have let the contract to erect the building for their plant, previously reported, to McPoland & Co. It is to be two stories, 50x140 feet.

Birmingham.—H. L. Wallington and Chas. Handy have bought 30,000 acres of coal lands in North Alabama for parties in New Orleans. The property will be developed.

Birmingham.—The Sloss Steel & Iron Co. have purchased the entire property of the Coalburg Coal & Coke Co. The Sloss Steel & Iron Co. will only build one new furnace, and will, it is said, begin work on a steel plant at once.

Birmingham.—The Griffin, La Grange & Western Railroad Co., the Macon & Covington Railroad Co. and the Savannah, Macon & Dublin Railroad Co. will be consolidated as the Birmingham & Atlantic Air Line.

Birmingham.—B. Wendell & Co. have completed their coffee and peanut roasting mill, previously reported.

Birmingham.—The Elyton Land Co. will build a planing mill.

Brewton.—C. L. Sowell, S. R. Sanford and E. Downing, reported last week as contemplating the erection of a large lumber mill, have bought 36,000 acres of timber lands.

Calera.—John Hardy has added some new machinery to his lumber mill.

Calera.—The Calera Shoe Co., capital stock \$25,000, has been organized, and will operate the shoe factory previously reported. R. J. Tyler is superintendent.

Calera.—C. P. Rogers, Jr., will start the brick works previously reported. Machinery has been purchased.

Calera.—The Calera Spoke & Handle Manufacturing Co., capital stock \$5,000, has been organized to start the handle and spoke factory, previously reported. F. W. Henderson is president and A. M. Reynolds, secretary and treasurer.

Columbiana.—It is stated that the Shelby Iron Co. contemplate erecting one or more iron furnaces.

Decatur.—J. D. Jervis, of Ironton, O., previously reported as to start a wheelbarrow and refrigerator factory, has, with others, organized the Decatur Manufacturing Co., capital stock \$25,000. W. E. Forest is president; C. C. Payne, secretary and treasurer, and Mr. Jervis, general manager.

Decatur.—E. C. Gordon, C. C. Harris, W. W. Littlejohn, W. E. Forest, W. T. Mulligan and W. K. P. Wilson, of Decatur, and S. A. Champion, of Nashville, Tenn., have incorporated the Decatur, Cincinnati & Southwestern Railroad Co., to build a railroad from Decatur to Danville, Ky., and thence to Cincinnati, O. The same parties have incorporated the Decatur, St. Louis & South Atlantic Railroad Co., to build a railroad to St. Louis.

Decatur.—The Alabama Lumber Co. will move their lumber mill from Fleming to Decatur.

Decatur.—The Decatur Compress & Warehouse Co., previously reported as organized, have purchased a 90-inch Morse cotton compress.

Demopolis.—The trustees of the Female Academy will erect a \$5,000 building.

Florence.—A candy and cracker factory will be built by James C. Anderson.

Greenville.—A bucket factory is to be established shortly.

Huntsville.—The Huntsville Electric Light Co. have contracted for the machinery for their plant. Will use the Jenny system.

Mobile.—The capital stock of the Gulf Coal & Coke Co. will be increased from \$350,000 to \$1,000,000.

Montgomery.—Negotiations are being made for the establishment of large works to manufacture car wheels.

Montgomery.—The North Belt Line & Manufacturing Co., reported last week as organized with John D. Roquemore as president, will build a standard gauge railroad.

Notasulga.—P. G. King is president, R. T. Armstrong, vice-president, and W. A. Cook, secretary and treasurer, of the Notasulga Granite Co., reported last week as to be organized. The capital stock is \$500,000. The company will build a short standard gauge railroad at once; also a 10,000-spindle cotton factory.

Oxana.—\$10,000 have been subscribed toward building a hotel.

Randolph County.—John A. Hart, W. A. Hart, W. E. Baskette, Gordon Lee, D. Waterhouse, E. Waterhouse and S. R. Read, of Chattanooga, Tenn., and others, have organized a company to develop mica mines.

Riverside.—The Riverside Land & Lumber Co., lately reported as incorporated by J. M. Smith and others, have bought and will enlarge the saw mill of Crowder & Smith, and will build a large planing mill. The company has purchased 6,000 acres of pine lands.

Russellville.—A saw mill is being erected. R. J. Nance can give particulars.

Selma.—A company is being formed to build a large fertilizer factory. The Selma Land, Improvement & Furnace Co. can probably give information.

Talladega.—A saw mill is being erected by Arthur Bingham & Co.

Talladega.—The Talladega Land & Improvement Co., W. H. Skaggs, president, will hold a meeting May 9 to increase their capital stock from \$500,000 to \$750,000.

Talladega.—The Brush Electric Light Co. have contracted to erect a plant.

Troy.—Folmar Bros. will build an opera house, and want to purchase furniture for it.

Tusculum.—A company is being formed to build a \$50,000 hotel.

Tuscaloosa.—The Friedman Furnace Co., previously reported, has been organized with B. Friedman as president; J. W. Castleman, vice-president; Louis Cohen, secretary, and George A. Searcy, treasurer. The company have been donated a 50-acre site for their furnace, and propose to begin work at once.

ARKANSAS.

Bear.—Biglin & Jacobs, Barnes & Ish and Rogers & Fisher are developing mines.

Bear.—The Bear Mountain Mining Co. have decided to erect a stamp mill.

Clarendon.—The Arkansas Midland Railroad Co. (office, Helena) will extend their road from Clarendon to Hot Springs.

Fort Smith.—The Fort Smith, Paris & Dardanelle Railway Co., capital stock \$1,000,000, has been chartered to build a railroad to Dardanelle, 80 miles. The directors are Thomas Boles, William M. Cravens, C. R. Jones, J. Henry Carnall and Thomas C. Humphry.

Hot Springs.—The C. H. Jacobs' Mining Co. are preparing to resume the development of their mines.

Hot Springs.—George Miller is president; L. S. Thompson, vice-president; George W. Watson, secretary, and J. P. Mercer, treasurer, of the Arkansas Mining & Smelting Co., and not the Crescent Mining & Smelting Co., as stated last week.

Hot Springs.—The Consolidated Mining & Reduction Co., previously reported, are preparing to erect chlorination works and a 10-stamp mill, and have selected a site.

Jefferson.—A sash and door factory is reported to be erected; also several saw mills.

Little Rock.—The Southern Cotton Oil Co., of Philadelphia, Pa., have selected a site for one of their oil mills. The capacity will be 150 tons of seed daily.

Little Rock.—A large cotton factory is to be started during this year. Fred. Hanger can give information.

Little Rock.—The Southwestern Land & Improvement Co., capital stock \$1,000,000, has been incorporated by A. B. Meeker, A. J. Warren and John B. Jones. Mr. Meeker is president.

Little Rock.—The Little Rock & Mountain Park Railroad Co., capital stock \$100,000, has been incorporated with E. V. Deuell, Thomas Lafferty, R. B. Gress, T. W. Bankes and John A. Pirtle as directors.

Little Rock.—The board of penitentiary commissioners will receive bids until June 6 for putting steam heating apparatus in the penitentiary.

Little Rock.—The Forest Land Co., capital stock \$50,000, has been organized with John C. England, of Lonoke, as president; John M. Taylor, Pine Bluff, vice-president, and George R. Brown, Little Rock, secretary and treasurer. The company has the privilege of operating manufactories.

Little Rock.—The Lutherans will build a \$15,000 church. Thomas Harding is preparing plans.

Newport.—The Newport Building & Loan Association has been incorporated, and will build an opera house.

Prescott.—Coal mines will be opened near Prescott.

Reyno.—The Reyno, Iron Mountain & St. Louis Railroad Co. has been chartered to build a railroad from Reyno to Corning, 20 miles. The directors are Levi Hecht and R. L. Brown, of Pocahontas; G. W. Goodrich, Black Rock; Leopold Thalheim, Newport, and S. W. Reynolds, Reyno.

FLORIDA.

Apalachicola.—A \$10,000 stock company is being organized to erect a fish and oyster canning factory. Machinery is now being purchased. Robert Morgan is interested.

Bartow.—The contract to build the jail, previously reported, has been let to George Lamoyne, of Orlando, at \$10,000. The contract to furnish the cells has been received by the Globe Iron Works Co., of St. Louis, Mo., at \$6,800.

Bartow.—J. A. Cloud, of Jacksonville, has made a proposition to build water works and erect an electric light plant.

Blue Pond.—A saw mill will probably be built.

Canton.—Mr. Ingalls contemplates erecting a saw and shingle mill.

Daytona.—A hotel is to be built by E. E. Vail.

Otter Creek.—A saw mill is to be built.

Ocala.—It is stated that a barrel factory and a fertilizer factory are to be erected soon.

Peru.—A broom factory has been started.

Sanford.—The Sanford Gas Light Co. are putting in new machinery to increase their capacity.

St. Augustine.—The St. Augustine Improvement Co. have contracted to erect a \$40,000 building for the St. Augustine Gas & Electric Light Co.

GEORGIA.

Adairsville.—Oglesby & Bro., of Kingston, may build a saw mill near Adairsville.

Americus.—S. H. Hawkins, John Windsor, J. W. Wheatly, A. E. Murphy, A. J. Hamil, A. J. Harper and others have formed a land and lumber company with a capital stock of \$100,000. Its object is to encourage the starting of manufacturing enterprises and develop timber lands.

Athens.—W. A. Carlton will erect a three-story iron front building to cost \$10,000.

Athens.—The company lately reported as formed to start a large sash, door, and blind factory will also start a brick yard.

Atlanta.—Charles Cohen will start an excelsior factory, and has purchased the necessary machinery.

Atlanta.—The East Atlanta Land Co., capital stock \$600,000, has been chartered by S. M. Inman, M. C. Kiser, Joel Hurt, John R. Gramling, R. J. Lowry, George Winship and W. A. Hemphill. The company has the privilege of building railroads, gas and water works, and mills and factories of any kind.

Atlanta.—The Atlanta Wagon & Timber Co., previously reported, have nearly completed their works. They will soon want to purchase more machinery.

Augusta.—W. F. Thomas and August Beall want to purchase kettles, cans, &c., to start a canning factory.

Augusta.—Jesse Thompson & Co. have sold a site to parties who will build a theatre.

Augusta.—Franklin Farrell, D. Bartholomew and Theodore P. Ferry will spend \$50,000 in enlarging and improving the Planters' Hotel.

Augusta.—The Davenport Manufacturing Co., capital stock \$5,000, has been organized to manufacture medicines, by J. D. Davenport and others.

Barnesville.—The Barnesville Manufacturing & Improvement Association has been organized to encourage and assist in the establishment of manufactures, etc. J. J. Rogers, J. W. Stafford and others are interested.

Camilla.—C. W. Collins is rebuilding his saw mill reported last week as burned.

Cedartown.—It is stated that parties from Pittsburgh, Pa., are erecting machinery to develop manganese lands.

Cedartown.—W. J. Alexander and T. J. Nicholl have opened a manganese mine.

Columbus.—The Georgia Midland Railroad Co. are preparing plans for a round house and depot, and will soon want bids.

Columbus.—David Mitchell will start a factory to manufacture bed spreads.

Columbus.—It is stated that some arrangements have been made looking to the erection of a large cotton factory.

Columbus.—The Swift Manufacturing Co. have decided to increase their capital stock to \$100,000, and add 8,000 spindles, previously reported, to their cotton mill.

Dalton.—H. A. Lowry and others contemplate erecting a planing mill, but as yet have reached no decision.

Dalton.—H. C. Hamilton and others are developing iron, manganese and marble lands near Dalton.

Dalton.—H. C. Hamilton and others are organizing a company with a capital stock of \$50,000 to build a woolen mill.

Dalton.—A soap factory is reported to be built.

Griffin.—J. C. King, Albert Brooks and B. C. Randall have formed a company to manufacture bricks, and will erect works at once.

Macon.—Colonel Whitehead has sold a tract of land to parties who will erect a manufacturing establishment.

McRae.—Telfair county will build a courthouse to cost about \$5,000.

Perry.—James N. Tuttle contemplates erecting an ice factory.

Poulan.—Mr. Girdmer and Charles Benson have formed a company with a capital stock of \$16,000 to manufacture lumber.

Rockmart.—S. E. Smith and James Whitehead talk of building one mile of street railroad.

Rome.—A wagon factory is to be erected soon. J. L. Bass can give information.

Rome.—F. Pence, lately reported as to organize a company to manufacture trunks, has, with M. L. Flowers, T. F. Smith, J. L. Camp, J. F. Harbour and others, chartered the Rome Trunk Manufacturing Co., capital stock \$25,000.

Savannah.—The Savannah Electric Light Co. are adding machinery for incandescent lighting.

KENTUCKY.

Ashland.—Henry J. Faust, George W. Edwards, Henry Belden, Henry McTighe and Louis E. Granger have incorporated the Faust Self-Extinguishing Car Stove Co., to manufacture stoves, &c. The authorized capital stock is \$250,000.

Flemingsburg.—A stock company will be formed to bore for oil and gas.

Junction City.—A natural gas company has been formed.

Louisville.—Davis Brown, Mr. Edmunds and others have leased about 7,000 acres of oil and gas lands and will develop them.

Louisville.—The Broadway M. E. Church will build a stone church corner of Fourth and St. Catherine streets. C. J. Clark has prepared plans.

Louisville.—Henry Disston & Sons' branch house are putting in boiler, engine, &c., for repair shops.

Lexington.—Mr. Eastin will build a hotel on Walnut street.

Maysville.—The Maysville Natural Gas Co., capital stock \$50,000, has been incorporated.

Owensboro.—A. C. Tompkins, J. D. Powers, P. T. Watkins, S. M. Deane, H. C. Gans and others have organized a company to develop oil and gas lands.

Owensboro.—The Owensboro Wheel Co. will rebuild their factory reported in this issue as burned.

Owensboro.—The carriage factory previously reported as being erected by J. F. Kimbley, will be occupied by F. A. Ames & Co. The cost is \$6,000.

Owensboro.—It is probable that a carriage factory will shortly be built by Indiana parties.

Paris.—A stock company has been organized to manufacture a grain and seed separator.

LOUISIANA.

Alexandria.—E. H. McCormick and others are trying to organize a company to build a cotton compress.

Alexandria.—The Alexandria & Texas Railroad Co., capital stock \$1,500,000, has been organized to build a railroad from Alexandria to Houston, Texas, by Amas B. Watson and William M. Robinson, of Grand Rapids, Mich.; Franklin H. Head, Chicago, Ill.; and R. J. Bowman, L. V. Marye and R. W. Brighthouse, Alexandria.

Baton Rouge.—Henry S. Raymond, of Chicago, Ill., has made a proposition to erect water works, which has been accepted. He is to begin work within 60 days.

Bayou Sara.—The Bayou Sara Compress Co. has been organized with Morris Wolf as president; Julius Picard, vice-president, and Wash Hands, secretary and treasurer.

Logansport.—Cicero Smith is erecting the mill reported last week. It is a saw, planing and shingle mill.

Mansfield.—The DeSoto Coal & Iron Prospecting Co. has been organized.

New Iberia.—Mr. Aucoin is erecting a steam cistern factory.

New Orleans.—A. E. Burke and others are forming a company to erect a charcoal plant and furnace in North Louisiana as soon as the quality and quantity of ore is assured.

New Orleans.—It is stated that M. Crawford, of Vicksburg, Miss., will erect a mill for cleaning the lint from cotton seed.

New Orleans.—The Tieless Insulator Co., capital stock \$50,000, has been incorporated with Benjamin N. Deblieux, T. L. Airey, Atwood Violet, Henry Tremoulet and A. T. Janin as directors. The object of the company is to manufacture and sell appliances for insulating wires or other conductors of electricity.

Waterproof.—Hartwig Moss is president of the Tensas Land Improvement Co., reported last week as incorporated. The object of the company is to develop agricultural lands, establish manufactories, &c.

MARYLAND.

Baltimore.—The Scott Manufacturing Co., reported last week as chartered to manufacture hardware, etc., have added a foundry to their works.

Baltimore.—H. Rosser & Son contemplate erecting a furniture factory on Haw street.

Baltimore.—It is rumored that a company is being formed to establish works at Curtis Bay to manufacture steel pipes and guns.

Baltimore.—The B. & O. branch of the Young Men's Christian Association will erect a building on Pratt street, 38x80 feet.

Baltimore.—William P. Weaver & Co. have received the contract to erect a wood and stone bulkhead at the city dock. The cost will be about \$6,500.

Elkton.—M. Gambrill, of Wilmington, Del., and Christian Devries, of Baltimore, have leased the Elk Mills (cotton) and will spend about \$30,000 in refitting them with new machinery. They have purchased the Dummerline Mill (cotton), at Baltimore, and will move the machinery to Elkton. The firm name will be M. Gambrill & Co.

Harford County.—It is reported that the York & Peach Bottom Slate Manufacturing Co. is being organized.

Hydes.—Haile & Jessoh will start a canning factory.

Westminster.—Becker Bros. will move their tobacco factory from Baltimore to Westminster.

Washington, D. C.—William M. Ludlow will receive proposals until April 20 for about 9 miles of terra cotta pipe from 8 to 24 inches, 5,400 Y branches and 300 connecting thimbles.

MISSISSIPPI.

Bogue Chitto.—The Keystone Lumber Co., George S. Lacey, manager, are building a saw mill.

Columbus.—L. C. Terry will start brick works, and has purchased the necessary machinery. He has contracted to furnish 500,000 bricks for the new cotton factory, previously reported.

Greenville.—A company has been chartered to build water works.

Greenville.—George Read, George Alexander and Deaton & Skinner, of Greenville; Scheibler & Macdonald, Memphis, Tenn., and others, have formed a company to build a cotton compress. Work is to commence at once.

Jackson.—A company will probably be formed to erect an electric light plant.

Okolona.—A tile factory has recently been established near Okolona by Brown & Bro.

NORTH CAROLINA.

Asheville.—The city has purchased machinery to manufacture bricks to pave the streets.

Asheville.—The Atlanta, Asheville & Baltimore Railroad Co., previously reported, has been organized with N. Atkinson as president; Garrett Ray, vice-president, and J. E. Rankins, secretary and treasurer. The directors have been authorized to contract for the construction of the road.

Charlotte.—The Young Men's Christian Association will erect a building to cost from \$12,000 to \$15,000. A. M. Inghue can give information.

Clemmonsville.—J. F. Swain is erecting a saw mill.

Dallas.—There is talk of a carriage factory being erected.

Durham.—It is reported that an ice factory will be established.

Durham.—James Y. Whitted has built a new tobacco factory.

Fayetteville.—John L. Allen is erecting machinery to manufacture tobacco.

Fayetteville.—Sutton & Henzy have bought the Novelty Works and are repairing them, and will add considerable new machinery.

Forest City.—J. N. Biggerstaff will probably build a flour mill.

Gibsonville.—B. & J. A. Davidson contemplate putting some additional machinery in their plaid mill.

Goldsboro.—The name of the company recently reported as formed to build a furniture factory is the Goldsboro Furniture Manufacturing Co. The capital stock is \$10,000. W. H. Borden is president, and John L. Borden, secretary and treasurer. A committee has been appointed to purchase machinery.

Goldsboro.—W. H. Griffin will start another brick yard with a daily capacity of 24,000 bricks. Will use steam power.

Greensboro.—It is rumored that large smelting works will be built near Greensboro by Canadian parties.

Greensboro.—The capacity of the cigar factory of J. K. Hall & Co. will be enlarged.

Haw River.—Thomas M. Holt will build a wood-working factory.

Montgomery County.—New machinery is to be erected at the Ophir mine.

Moon County.—Operations are to be resumed at the Cagle gold mine.

Salisbury.—A cigar factory will be started by George F. Heller, of Salem, Va.

Salisbury.—Foard, Rice & Bost will start a tobacco factory. They have ordered machinery.

Salisbury.—The contracts have been let for large plant of improved machinery for the Helen Grupy mine near Salisbury. A. T. Nye is manager.

Salisbury.—There are prospects of a cotton factory being built.

Swan Quarter.—A saw mill will be built by Spencer Bros.

Wilmington.—The Wilmington Street Railway Co., previously reported, will shortly begin building their road. It will be about 5 miles long. Rails have been purchased.

Winston.—John T. Moore, of Havre de Grace, Md., contemplates erecting an ice factory.

SOUTH CAROLINA.

Abbeville.—The Presbyterians will build a new church. R. H. Wardlaw can give information.

Bishopville.—Furman J. Smith has rebuilt the grist mill of Floyd & Andrews, burned several months ago.

Columbia.—J. B. Turner, previously reported as starting a can factory, will also start a canning factory.

Darlington.—Woods & Spain have lately started a brick-yard.

Spartanburg.—Subscriptions are being received towards the organization of a company to build a cotton factory.

Sumter.—A. C. Duraut and H. G. Scarborough are erecting brick works.

TENNESSEE.

A. B. C.—A distillery will be started by Charles Duffer.

Bolivar.—Tally & Sanders will erect a steam saw mill at Statler's ferry, with a capacity of 15 M feet daily.

Bristol.—A Philadelphia syndicate have purchased several hundred acres of land with a view, it is said, to erecting a large iron furnace and lumber manufactories. W. A. Sparger can give information.

Bristol.—John R. Richardson has lately started a broom factory.

Carthage.—F. Kincade and others have leased and will probably develop iron ore lands.

Chattanooga.—Samuel R. Read will spend about \$40,000 or \$50,000 in enlarging and improving his hotel, previously reported.

Chattanooga.—J. T. Reamy, of Nashville, has organized a company with a capital stock of \$25,000, to manufacture machinery for saw mills, etc. Will commence work at once.

Chattanooga.—Dobbs & Reynolds will at once rebuild their grist mill reported in this issue as burned.

[CONTINUED ON PAGE 366.]

New Era Planing, Matching and Molding Machine.

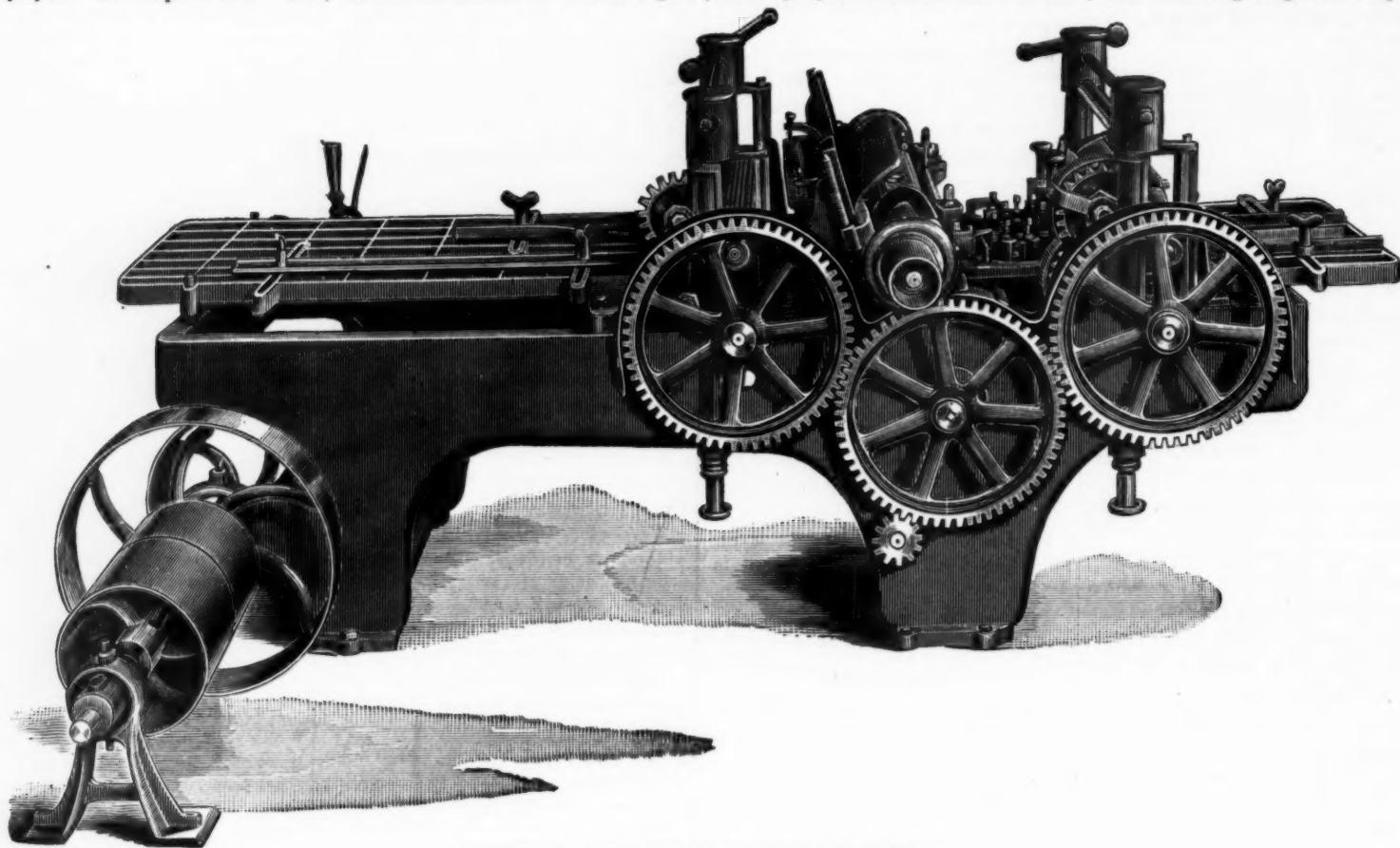
The accompanying cut shows the "New Era" Planer, Matcher and Molder made by Messrs. Sniggs & Co., of Buffalo, New York. This machine is designed for all planing-mill purposes and requirements. The

and driven with improved expansion gearing; The rolls are held down by strong steel springs capable of standing the pressure of several tons, and so arranged that more or less pressure can be given them by turning a small hand wheel. The delivery rolls are provided with improved scrapers, which enable them to run in even the gum-

Orient Cluster Lamps.

The accompanying illustration represents one form of the Orient Cluster Lamps, which are being put upon the market by the Lamp & Brass Works of W. J. Gordon, of Cleveland, O. The principles upon which the lamps operate are well known in other

the trade as the Cleveland non-explosive lamp. The burner is argand in principle, using a round wick and admitting a current of air up through the lamp. The flame is spread by means of a metal cap fixed somewhat above the opening in the top of the burner, the location of which is clearly indicated in the engraving. The shape of the



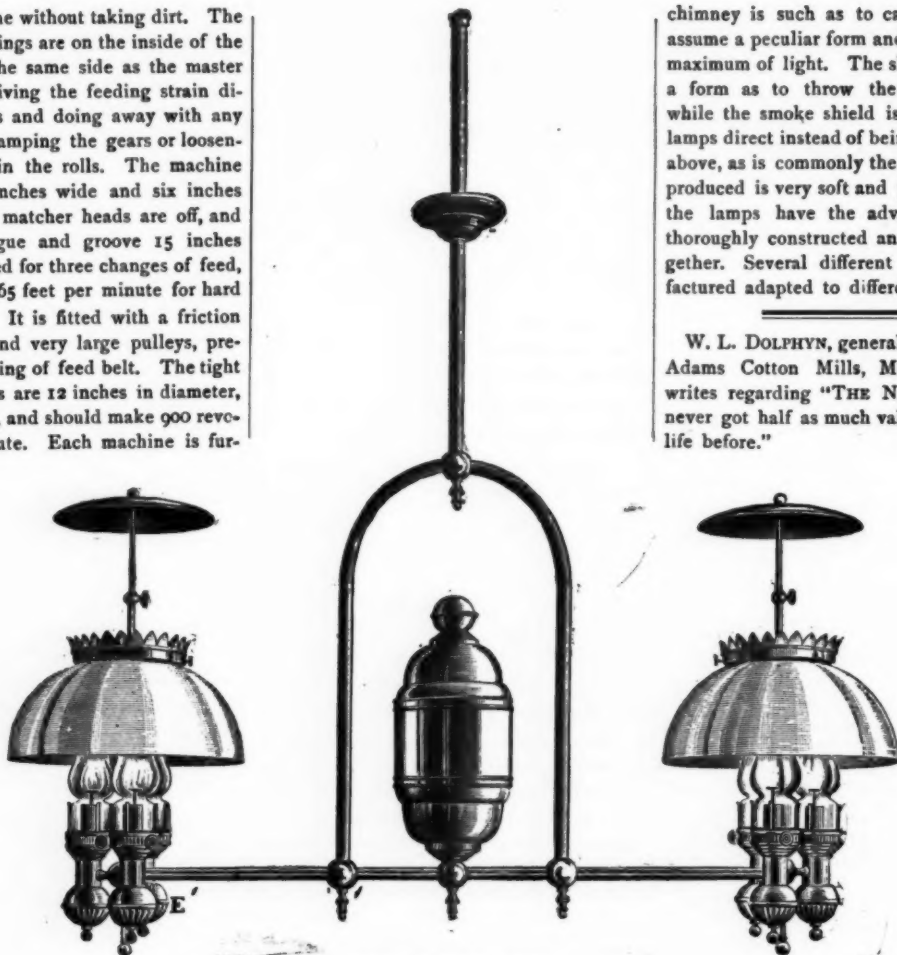
"NEW ERA" PLANING, MATCHING AND MOLDING MACHINE.

details of its construction for strength, strain and convenience, are in accordance with the most advanced ideas for building first-class machines, and the latest improvements are embodied in it. The frame is both strong and beautiful, its smooth sides being curved on the inside, thus making a double internal rib, while the cylinder is of solid forged steel, slotted on two sides, making a head on which any kind of knife can be bolted and beaders used; it is double belted, having two five inch face pulleys on the ends. The cylinder boxes are yoked together, thus preventing them by any possibility from getting out of line; they are very heavy, eight inches long, and lined with Babbitt metal. The matcher heads are of cast steel and run on heavy steel spindles which are babbitted on strong yoked frames. Both heads are adjustable and can be placed so as to feed the flooring over any part of the table, insuring an equal wearing on the bed. The spindles come up even with the bed, the heads having a long hub cast on the under side, so as to go down on the spindles, and by loosening one screw on each head they can be instantly taken off and the full width of the machine can be used. Improved pressure bars are so adjusted that both the receiving and delivery bars may be moved to and from the cutter head with a range of two inches, allowing the knives to project beyond the lips of the head, to work novelty siding, moldings, etc. The receiving pressure bar is pivoted to swing entirely clear of the head, to admit of sharpening and adjusting the knives with convenience. When ordered, the manufacturers can furnish this machine with their extra or molding pressure bar, to which can be attached a foot or shoe fitted to the molding required, thus enabling the operator to do the most perfect work and prevent all tearing out, even in cross-grained wood, and giving a cut that all mill men look for, free from vibration and tremble. This gives the machine the advantages of an inside molder. The feed is very powerful, and consists of four 5-inch feed rolls very strongly geared

miest yellow pine without taking dirt. The connection gearings are on the inside of the frame and on the same side as the master gears, thereby giving the feeding strain direct to the rolls and doing away with any possibility of cramping the gears or loosening the shafts in the rolls. The machine will plane 24 inches wide and six inches thick when the matcher heads are off, and will plane, tongue and groove 15 inches wide, and is fitted for three changes of feed, viz: 35, 50 and 65 feet per minute for hard and soft wood. It is fitted with a friction belt-tightener and very large pulleys, preventing all slipping of feed belt. The tight and loose pulleys are 12 inches in diameter, with 6-inch face, and should make 900 revolutions per minute. Each machine is fur-

nished with a pair of patent beading heads for beading and center-beading, a pair of Novelty siding knives and a pair of jointing knives.

W. G. KAY, late superintendent of the American Oil Co's Brooklyn mill, has accepted a position with the Southern Cotton Oil Co.



ORIENT CLUSTER LAMP.

chimney is such as to cause the flame to assume a peculiar form and to throw out the maximum of light. The shades are of such a form as to throw the rays downward, while the smoke shield is attached to the lamps direct instead of being sustained from above, as is commonly the case. The light produced is very soft and yet brilliant, and the lamps have the advantage of being thoroughly constructed and neatly put together. Several different styles are manufactured adapted to different requirements.

W. L. DOLPHYN, general manager of the Adams Cotton Mills, Montgomery, Ala., writes regarding "THE NEW SOUTH:" "I never got half as much value for \$3 in my life before."

forms, but their combination is new. The oil is contained in the reservoir shown near the center of the engraving, and is fed to the several lamps upon the student-lamp principle. The burners employed are of a kind well known to many of our readers, being long employed upon what is known in

THE BALTIMORE MANUFACTURERS' RECORD is the great representative industrial journal of the South. It is doing excellent work in showing up the resources and development of the South, and as a record of commercial interest in that section it has no equal.—Buffalo Lumber World.

Double E Saw Mill.

The accompanying cut illustrates a double saw mill, designed to meet the wants of many Southern people, that has met with favor wherever used. This mill was awarded the first premium at the Atlanta Cotton Exposition in 1881 and at the St. Louis Fair in 1882. Ten to fifteen horse-power is required to run it. The husk or frame is made of seasoned lumber, well rodded together; is 7 feet 4 inches in length by 3 feet 6 inches in width; timbers $1\frac{1}{4}$ inches by $3\frac{1}{2}$ inches. The husk being of wood is light and easily moved from one locality to another. The top saw frame is made entirely of iron, sufficiently heavy for strength. The mandrel boxes are strongly connected and cannot get out of line. The top saw can be raised or lowered by a simple and effective device. The lumber rollers are wrought iron and made to revolve. Any good 10 horse-power engine will, it is said, carry the saw through

Ammonia as a Motor.

The New Orleans Picayune gives an account of the trial trip of a street car propelled by an ammonia engine, from which we take the following points:

The car, which had been fitted up with an ammonia engine, reservoirs, valves, patent car breaks, etc., was ready for the trip at 3 o'clock.

Beyond a few iron pipes, 2 gauges to record the pressure, a lever brake and a small iron cylinder which run on the plat-

Mr. McMahon says that a car with a charge such as that of yesterday, could readily be run twelve miles, and it was not considered a full charge.

The ammonia, in order to produce the gas necessary to propel the car, is warmed to 80 degrees Fahrenheit, and after passing through the engines and performing its functions is returned to the reservoir, which contains a weak solution of ammonia held in a boiler or reservoir, which encases the cylinder which contains the pure ammonia. The gas on entering the cylinder with the

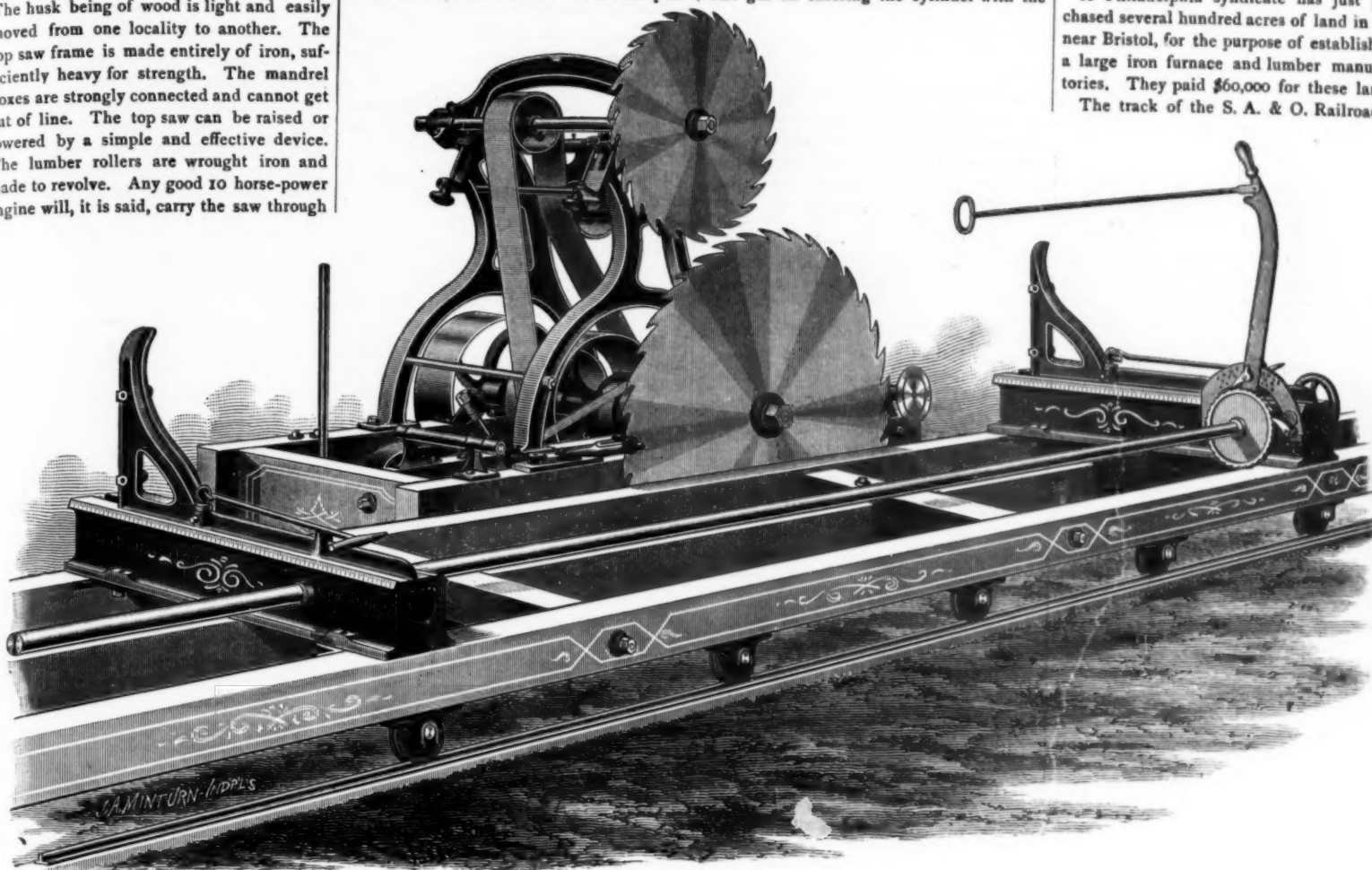
while the chances to catch are greater. These traps are made of Nos. 12 and 15 netting, 1, $1\frac{1}{2}$ and $1\frac{3}{4}$ inch square mesh, tarred and ready for use. They are well adapted for use in water from 4 to 10 feet deep, either along shores or in rivers or creeks. Messrs. J. S. Johnson & Co., No. 121 South street, Baltimore, are the manufacturers.

Notes from Bristol.

BRISTOL, TENN., April 6, 1887.

Editor Manufacturers' Record:

A Philadelphia syndicate has just purchased several hundred acres of land in and near Bristol, for the purpose of establishing a large iron furnace and lumber manufacturing. They paid \$60,000 for these lands. The track of the S. A. & O. Railroad is



DOUBLE E SAW MILL.

the largest hardwood log on the $\frac{3}{4}$ -inch feed, and in small logs the two-inch feed will double the capacity. This mill is substantially built to stand wear and tear. All parts are numbered and made to fit gauges or templates, and by telegraphing the number new parts can be obtained without delay. These mills can be run by three men, and will cut from 4,000 to 6,000 feet of inch-lumber per day of ten hours. They are made in six sizes, varying in capacity from 4,000 to 75,000 feet per day. There are many other good points, not given here, which will be furnished by the manufacturers, Messrs. Rockwood, Newcombe & Co., of Indianapolis, Ind., who also manufacture the well-known paper pulleys and a complete line of saw mill machinery, including lath mills, shafting, pulleys and friction wheels.

THE first number of the Daily Hot Blast, Anniston, Ala., was issued on April 9, under the editorial management of Mr. Jas. R. Randall, for many years the editor of that most excellent paper, the Augusta Chronicle. The Hot Blast takes the Associated Press dispatches, and, as there is an abundance of money at the back of the enterprise, we doubt not but that it will be a paper of which not only Anniston but all Alabama may well be proud. We extend our best wishes to Mr. Randall and hope that abundant success may crown his labors in his new home.

form of the car, there was nothing to be seen which would indicate the mode of propulsion. The engine was under the platform of the car, and extending almost the length of the car back, was the reservoir, which held the subtle fluid which was to furnish the necessary force to propel the car.

At 3:15 o'clock Mr. P. J. McMahon opened a valve on the platform, and without noise, escape of steam or smoke, the car glided smoothly and slowly out from the car shed and upon the turn-table.

The pressure gauge recorded 120 pounds to the square inch, and this was maintained until the car had nearly reached Carrollton, when it dropped down to about 110 pounds, and remained thus until the car ran upon the turn-table at Carrollton, when it again went back to 120 pounds pressure.

The run, a fraction less than 3 miles, was made in 10 minutes, inclusive of 1 full stop en-route to allow one of the passengers to disembark. The return trip was made in 14 minutes, but the car had to stop twice on account of a dummy in front, which stopped twice for passengers and once for a number of gentlemen who boarded the Standard Company's car and made the trip down to the station, or starting point.

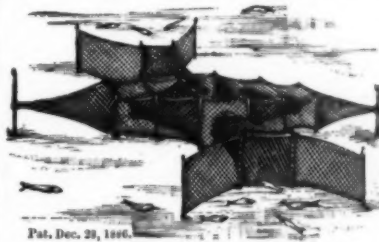
The car ran very smoothly and rapidly, started without the jolt or jar so common with the use of locomotives, and was stopped much more quickly than could be a car drawn by one of the dummy engines in use on the Carrollton Railroad.

When the engine was returned to the car shed, and had been standing there about ten minutes, the gauge registered a pressure of 140 pounds to the square inch.

weak solution is absorbed, having a great affinity for water. There is no unpleasant odor attending the use of ammonia engines, and the invention is a decided success, judging from the trial made yesterday.

Patent Fish and Terrapin Trap.

The special advantage of the Patent Fish and Terrapin Trap shown in our illustration over the old style fyke net is, that it has a square center chamber into which the fish enter through two funnels on opposite sides,



Pat. Dec. 29, 1886.

PATENT FISH AND TERRAPIN TRAP.

being guided to them by the wings, either open, as shown in the cut, or set in shape of heart or bay with leader; thence they pass through the funnels into the trap or bags on either side of the chamber. They are taken out by disconnecting the end of trap or bags from the stake or pole and raising it above water; the net-wall at the first frame prevents the fish falling below that point, and they are easily removed by opening the end of the trap or bag. The bag is then tied again and replaced to the stake. The probability of fish escaping from this trap after they once enter is much less than in other traps,

completed as far as Mendota, and the rolling stock is upon it. This road opens up some of the finest mineral and timber lands of Virginia, and gives to our city the facilities for making iron and lumber as cheaply as any city in the South, and, indeed, we are favorably located for any of the diversified industries; and just here let me say that we are prepared to offer inducements to any party who will plant a large steam tannery, and the writer will be glad to communicate with a responsible person upon this subject.

Mr. R. J. Reynolds, of Winston, N. C., has, during the last few days, purchased several valuable lots here, and upon one of them, it is reported, will erect a large tobacco factory.

J. R. Richardson has recently established a broom factory and is now turning out brooms of superior quality.

The Bristol Veneering Factory has its machinery about all put in, and will begin work at once. It is, perhaps, the largest factory of the kind in the State.

Dr. J. F. Hicks has decided to erect a \$20,000 hotel, to begin in May.

J. McCrowell will build an opera house during the summer, to cost from \$10,000 to \$15,000.

Sullins College is to be remodeled and enlarged at a cost of \$10,000; work to be completed before September 1.

The Y. M. C. A. building is ready to be let to contract, and is to cost \$8,000.

Messrs. Buffum & Co., of Boston Mass., are building a large planing mill and sash and blind factory.

We need good mechanics of every kind.
W. A. SPARGER.

[CONTINUED FROM PAGE 363.]

Chattanooga.—The City Street Railroad Co. has been chartered by John P. White, C. Cooper, H. B. S. Subblefield, John P. Williams and James McLaughlin.

Chattanooga.—It is reported that a company has been formed to develop 75,000 acres of land near Allardt.

Chattanooga.—It is stated that Moore & Shannon have increased the capacity of their brick works.

Chattanooga.—The arrangements have been completed for the erection of the tool factory reported last week. The East End Land Co. have donated a site for the factory and can give information.

Chattanooga.—Samuel Blair and others have formed a company to bore for oil and gas.

Chattanooga.—H. J. Johnson is adding a planing mill to his saw mill. Machinery has been purchased.

Cleveland.—A company has been formed to build a railroad to Dayton, with Mr. Ferguson as president, and H. W. Horner, secretary. Surveys will be made soon.

Gallatin.—Samuel Lyon has purchased the Gallatin Flour Mills, and will improve them.

Jackson.—A \$100,000 stock company is forming to build a cotton factory. Caruthers & Mallory can give information.

Knoxville.—The Walker Horse Shoe Co., of Baltimore, Md., whose works were burned several months ago, have arranged to build new works at Knoxville. A new company has been formed.

Loudon.—The report referred to last week that a furniture factory would be built by G. N. Henson, of Chattanooga, is premature.

Mitchellville.—A distillery has been started 12 miles from Mitchellville by Mr. Denning.

Nashville.—John F. Alexander, of Washington, D. C., is organizing a company to manufacture iron by a patent process. The capital stock will, it is said, be \$1,000,000. Z. H. Zarecor, Nashville, can give particulars.

Nashville.—The contract to erect the school building previously reported has been let to P. Morrison at \$11,600.

Nashville.—The Rangum Root Medicine Co., previously reported, have organized with Baxter Smith as president; James J. Vaughn, vice-president; W. C. Campbell, treasurer and general manager, and John Gaudinger, Jr., secretary. Their capital stock is \$100,000. The company will begin operation at once.

Nashville.—The Nashville Brick & Tile Co., capital stock \$50,000, has been organized with J. H. Acklin as president, and Norman M. Pierce, vice-president. Machinery will be bought and works erected at once.

Nashville.—The Nashville Gas Co. will erect a brick meter-house to cost \$10,000.

Richland Station.—F. M. Perdue has started a distillery.

Sparta.—An Atlanta (Ga.) company have leased marble quarries near Sparta, and will develop them.

Spring City.—K. E. Conant is erecting machinery to manufacture bricks and tiles.

TEXAS.

Alvarado.—A company has been formed to bore artesian wells. The mayor can give information.

Ballinger.—N. B. Jones has leased and will develop 640 acres of coal lands one mile from Ballinger.

Dallas.—The Dallas Ice Co., capital stock \$50,000, has been organized with R. C. Graves, of Memphis, Tenn., as president; Charles J. Ball, St. Louis, Mo., vice-president, and E. W. Cole, superintendent and treasurer. The company have nearly completed their ice factory.

Dallas.—W. D. Wylie and W. M. Alexander have made arrangements for the building of an elevated railroad estimated to cost about \$200,000.

Dallas.—The North Texas Lumber Co., capital stock \$25,000, has been chartered by W. C. Walter, W. H. Weldon and W. L. Hall.

Ennis.—It is stated that A. H. Rowe and Mr. Moore will build a roller flour mill.

Fort Worth.—A company is being organized to build a tannery.

Gainesville.—J. D. Buckley is rebuilding his planing mill reported last week as burned.

Galveston.—The name of the \$500,000 stock company reported last week as to be organized to build a large bagging and cordage factory, by Adoue & Lobitt and others, will be the Galveston Bagging & Cordage Co. Machinery will be purchased soon.

Galveston.—The McKinney Oil Works, capital stock \$50,000, have been incorporated by B. Adoue, J. L. Kane and Joseph Lobitt.

Galveston.—The Galveston, Henderson & Houston Railroad Co. have commenced work on a new bridge across the Buffalo bayou. It will cost about \$80,000.

Galveston.—Toebelman & Co. have started a shoe factory lately.

Gordon.—James Byrns and John Thomas have leased coal lands 3 miles from Gordon, and are now developing them.

Henderson.—Judon H. Wood will receive bids until April 19th for the erection of a brick jail.

Hubbard City.—J. H. Lippard is organizing a company to bore an artesian well, to secure water for fire and other purposes.

Laredo.—The Mexico National Construction Co. have contracted to build the railroad bridge across the Rio Grande river, previously reported.

Malakoff.—B. F. Giltner and H. L. Molloy, of Corsicana, will open the coal mines previously reported.

Marshall.—R. C. Garrett is president; E. J. Fry, vice-president, and James H. Carter, secretary and treasurer of the Marshall Opera House Co., capital stock \$20,000, reported last week as being formed. The building is to cost not less than \$15,000.

Murphyville.—T. S. Brockenbrow will receive bids until May 9th for the erection of a jail not to cost over \$12,000 and a courthouse not to cost over \$15,000.

Navasota.—The Farmers' Alliance contemplate forming a co-operative company to build a cotton factory.

New Braunfels.—The contract to build the iron bridge across the Guadalupe river, previously reported, has been let to the King Iron Bridge Co., of Cleveland, O. It will cost \$25,000.

Paris.—J. D. Elliott, W. B. Wise, John Marlin, Frank Fitzhugh and Joe Thomas have chartered the Arctic Ice & Refrigerator Co., capital stock \$20,000. The company are building the ice factory previously reported, and will add refrigerating machinery and bottling works. J. D. Elliott is superintendent.

Temple.—The name of the company previously reported as being formed to build a cotton factory, by the Farmers' Alliance, will be the Central Texas Cotton Co-operative Manufacturing Union. The capital stock will be \$100,000. James M. Smith is secretary.

Texarkana.—W. Behrens, J. H. Sinclair, R. D. Harrell and H. S. Matthews have incorporated the Matthews Lumber Co., capital stock \$15,000.

Tyler.—It is reported that stock companies have been formed to build a cotton factory and an oil mill. If true, the mayor can probably give information.

Winston.—It is stated that a creamery is to be built. Edwin Montgomery, Starkville, Miss., can give particulars.

VIRGINIA.

Central (P. O. Lovely Mount).—F. J. Kimball, of Philadelphia, Pa., and others, have purchased a large tract of land near Central for \$105,000. It is rumored that an iron furnace may be built.

Central (P. O. Lovely Mount).—Stockton Heth and Mr. Tyler will build a hotel.

Floyd C. H.—W. Scott will start the axe handle factory reported last week.

Hamilton.—S. W. Kahle has fitted up the old foundry building to manufacture and repair carriages, &c.

Lambert's Point.—The Norfolk Terminal Co., of Norfolk, will build a large coal and iron pier.

Liberty.—Bolling, Wright & Co., whose tobacco factory was lately reported as burned, are fitting up a new factory.

Mt. Athos.—Redmond & Lerner, of Clifton, W. Va., have leased manganese ore lands, and are building machinery to take out and work the ore.

Marion.—Iron ore mines are being opened and developed by William Faux, of Philadelphia, Pa.

Petersburg.—David Dunlop has let the contract to build his new tobacco factory, previously reported. It will cost about \$40,000.

Wytheville.—The incorporators of the Rich Valley Iron & Gypsum Mining Co., previously reported, are T. P. Watson, of Pearisburg; Thomas Smith, W. L. Yost, J. H. Wingate and C. B. Thomas, Wytheville; Samuel Walton, Charlestown, W. Va.; Henry Fairfax and G. H. Dulaney. The company have the privilege of building a railroad.

WEST VIRGINIA.

Elizabeth.—A flour mill is projected.

Moundsville.—F. M. Lowry, of Wheeling; A. Lowry, Washington, Pa., and George L. Craig and Joseph W. Craig, Pittsburgh, Pa., have incorporated the Mound City Gas Co., to bore for oil and gas, construct pipe lines, etc. The capital stock is limited to \$100,000.

Pocahontas County.—A stone quarry will be developed by E. H. Wayman, of Staunton, Va.

Wheeling.—Klieves, Kraft & Co. have received the contract to erect a school building to cost \$37,000.

Winifrede.—It is reported that the Winifrede Coal Co. will open new coal mines and extend their railroad.

BURNED.

Chattanooga, Tenn.—The grist mill of Dobbs & Reynolds; loss about \$4,000. Will be rebuilt at once.

Hertford, N. C.—The saw and planing mill of Fleetwood Bros. damaged \$4,000 by a boiler explosion.

Lewisville, Texas.—The flour mill of the Lewisville Milling Co.; loss \$20,000.

Owensboro, Ky.—The factory of the Owensboro Wheel Co. Will be rebuilt.

Pratt Mines, Ala.—The machinery at the coal mines of the Tennessee Coal, Iron & Railroad Co. damaged \$25,000 by fire.

Ritchie C. H., W. Va.—The saw mill of William Morris damaged by a boiler explosion.

Whitehall, Texas.—The gin and grist mill of George W. White damaged by a boiler explosion.

Winston, N. C.—The tobacco factory of Dodd Bros.; loss \$3,000.

Machinery Wanted.

AUGUSTA, GA., April 9, 1887.

Editor Manufacturers' Record:

We want to correspond with makers of kettles, cans, labels, &c. W. F. THOMAS.

AUG. BEALL.

Machinery Wanted.

ATLANTA, GA., April 12, 1887.

Editor Manufacturers' Record:

We have commenced work. Three buildings have been erected and the building nearly done for warehouse. Our capacity will soon be 4,000 wagons, with plenty of room on property to double it as occasion requires. Have a good deal of machinery, but will soon want best improved machinery for iron work and wheel and wheel-boxing machines and thimble skein lathes.

ATLANTA WAGON & TIMBER CO.

BIRMINGHAM, ALA., April 11, 1887.

Editor Manufacturers' Record:

The Edison Electric Illuminating Co., of Birmingham, has commenced work on their plant. The poles for the line have all been placed and the wiring is being done now. Work on the station has commenced and will be rapidly pushed. The station will be 150 feet by 50 feet, and will contain ample boiler and engine room for a liberal increase in capacity as it is demanded by the public.

EDISON ELECTRIC ILL. CO.

To Build a Woolen Mill.

DALTON, GA., April 11, 1887.

Editor Manufacturers' Record:

Myself and others are developing the mineral land in this section, consisting of iron, manganese and marble, which are in inexhaustible quantities and of the finest quality. We are also contemplating building a woolen mill in Dalton, to be stocked at \$50,000; \$40,000 already taken, balance will be taken this week. H. C. HAMILTON.

Cotton Compress to be Erected.

GREENVILLE, TEXAS, March 30, 1887.

Editor Manufacturers' Record:

There will be a street railroad built here this summer; also a compress will be built here. T. H. King and B. F. Loney will build railroad, and S. C. Wise and Rainey the compress.

P. H. W. SPENCER.

To Manufacture Fertilizers.

MARIETTA, GA., April 5, 1887.

Editor Manufacturers' Record:

We have chartered the Marietta Guano Co., with a capital stock of \$10,000, for the purpose of manufacturing a high grade fertilizer.

W. H. WARREN.

A Five-Roller Sugar Mill.

CYPRMORT, LA., April 4, 1887.

Editor Manufacturers' Record:

The Whitney Iron Works Co., New Orleans, are building me a new five-roll sugar mill.

P. SCALLY.

GEORGETOWN, TEXAS, April 7, 1887.

Editor Manufacturers' Record:

The Simmons Bros. & Kincaid Marble Co. have secured by purchase the tract of land in Burnet county, Texas, covering the Webster creek marble deposits, and propose developing the same. We have marble that will compare favorably with Italian or Vermont products. We also have the Tennessee grade on the same tract, both in almost inexhaustible quantities. The above land is situated in the heart of the granite country, and we have a fine quality of same, which we expect to use if occasion demands.

SIMMONS BROS. & KINCAID MARBLE CO.

To Build Water Works.

LAGRANGE, TEX., April 8, 1887.

Editor Manufacturers' Record:

We intend to put up water works here. Our plans are not matured.

LAGRANGE WATER WORKS CO.

J. C. BROWN, Pres't.

Large Cotton Factory to be Erected.

NOTASULGA, ALA., April 6, 1887.

Editor Manufacturers' Record:

The large cotton factory is a certainty, and the capital stock is to be \$500,000. The company consists of P. G. King as president; R. T. Armstrong, vice-president; W. A. Cook, secretary and treasurer; and J. M. Carter, general manager, and W. J. Vaun, J. T. Nixon, J. D. Getry, R. W. Trammell, directors. G. W. ARBERY.

Bids Wanted for Building Furnace.

ROME, GA., April 4, 1887.

Editor Manufacturers' Record:

Can you place us in correspondence with a few reliable contractors that can meet an urgent demand for building a charcoal furnace at Rome? J. L. BASS,

Sec'y ROME LAND, IRON & FURNACE CO.

Will Build a Woolen Mill.

SADLERSVILLE, TENN., April 5, 1887.

Editor Manufacturers' Record:

I am going to build a woolen factory. Will build next month. Capacity 24 looms. Building 80x40 feet, two story. T. J. MITCHELL.

To Build an Organ Factory.

LOUISVILLE, KY., April 8, 1887.

Editor Manufacturers' Record:

It is our intention to build during this season a steam power organ factory, capacity for 200 hands, and have recently purchased a site for that purpose. HENRY PILCHER'S SONS.

PARIS, TEXAS, April 8, 1887.

Editor Manufacturers' Record:

J. D. Elliott, John Marlin, W. B. Wise, Frank Fitzhugh and Joe Thomas, all of Paris, have organized the Arctic Ice & Refrigerating Co., with a capital stock paid in of \$20,000. Are putting in a 15-ton machine, to be in operation by June 1. We propose putting in first-class refrigerating machinery and bottling works in addition to the ice machinery. J. D. ELLIOTT, Supt.

DARLINGTON, S. C., April 9, 1887.

Editor Manufacturers' Record:

There is a brick yard here lately established by Messrs. Woods & Spain. P.

ASHEVILLE, N. C., April 5, 1887.

Editor Manufacturers' Record:

We have opened a planing, moulding and turning mill, and intend making a specialty of mantels, brackets, balusters, newells and all builders and cabinet makers' turning. Next to our mill will shortly be started a cotton factory by C. E. Graham & Co., and a new grist mill by a Mr. Reiley. C. G. WEST & CO.

Building Planing Mill.

RIVERSIDE, ALA., April 4, 1887.

Editor Manufacturers' Record:

The saw mill property and timber lands of the firm of Crowder, Smith & Co., Riverside, Alabama, were transferred to the Riverside Land & Lumber Co., with a capital stock of \$75,000. The officers are J. M. Crowder, president; D. Nye McBrier, secretary, and J. Morgan Smith, treasurer and general manager. The company is now making extensive repairs in its saw mill. Among the improvements are an 18x24 inch engine, Prescott steam feed, live rolls, &c. The mill is expected to cut 60,000 feet per day when completed. The company is also building a complete planing mill and dry kilns, and expect to have, when completed, as fine a plant as can be found in the South. D. NYE MCBRIER, Sec.

Machinery Wanted for New Factories.

ROME, GA., April 1, 1887.

Editor Manufacturers' Record:

We, last night, organized a company to manufacture chairs, and one to make trunks, each with a capital of \$25,000. Both companies want first-class superintendents to take charge of them. None but thoroughly competent, energetic, strictly temperate, business men with means to take some stock need apply. We will want, as soon as possible, all the machinery requisite for both factories of the very best quality. Correspondence solicited. Address, Rome Chair and Rome Trunk Manufacturing Co. Rome is on a big boom. The MANUFACTURERS' RECORD is doing good work for the South. F. PENCE.

To Build an Opera House.

MARSHALL, TEXAS, April 2, 1887.

Editor Manufacturers' Record:

We have a stock company formed with a capital of \$20,000, to build a first-class opera house, 120x77 feet, two stories high. JAS. H. CARTER.

Wagon Factory to be Built.

ROME, GA., April 5, 1887.

Editor Manufacturers' Record:

A wagon factory will be put up here. Work to begin in a few weeks. J. L. BASS, Secretary.

To Manufacture Machinery.

CHATTANOOGA, TENN., April 8, 1887.

Editor Manufacturers' Record:

I will organize a company with a capital of \$25,000, fully paid up, to manufacture automatic board set knee receders, variable feed saw mills complete, and a full line of saw mill appliances. Will be in operation in 40 days. T. J. REAMY.

EDWARDSVILLE, ALA., April 4, 1887.

Editor Manufacturers' Record:

The Arbacoochee Gold Mines are now being developed by a St. Louis company. Col. Thompson is superintendent. A Mr. Noell is concerned. Their engines, machinery, etc., will be in operation in a few weeks. T. J. BURTON.

SALISBURY, N. C., April 8, 1887.

Editor Manufacturers' Record:

We expect to manufacture smoking tobacco in connection with our plug and twist. Smoking tobacco machinery is now ready for placing. FOARD & RICE.

Erecting Flour and Corn Mill.

NEW MARKET, TENN., April 6, 1887.

Editor Manufacturers' Record:

I will complete my mill building this week. My object is to be ready for the present crop of wheat. It will be a wheat and corn mill on the very best plan. J. E. GARDNER.

Coal Mines to be Opened.

MALAKOFF, TEXAS, April 4, 1887.

Editor Manufacturers' Record:

Some gentlemen from Corsicana, Texas, (B. F. Giltner and H. L. Molloy) will begin in a few days to open up the coal mines here. The vein is from six to seven feet thick. P. M.

Erecting Saw, Planing and Shingle Mill.

LOGANSFORD, LA., April 5, 1887.

Editor Manufacturers' Record:

A saw, planing and shingle mill is being erected here by Mr. Cicero Smith. A. M. GARRETT.

A Woolen Mill to be Built.

DALTON, GA., April 8, 1887.

Editor Manufacturers' Record:

Myself and others have been investigating the planing mill business in view of erecting one at this place, but have not fully decided as yet what we will do. There is being organized at this place a stock company, capital \$50,000, to erect and operate a woolen mill. About half the stock taken in 24 hours after list was circulated. H. A. LOWRY.

To Build a Street Railroad.

FORT SMITH, ARK., April 8, 1887.

Editor Manufacturers' Record:

The Fort Smith & Vanburen Street Railway Co. will build a railroad between this and next fall. The city council has not acted on our application for right of way through the city, but will no doubt soon, and the work will begin soon after. THOS. MARCUM.

To Build Lime and Cement Works and a Woolen Mill.

GRAYSVILLE, GA., April 5, 1887.

Editor Manufacturers' Record:

We bought the Catoosa Mining & Manufacturing Co. and the property of C. W. Gray & Co. Will at once build five new lime kilns and cement works, and in the near future build a woolen mill and make many other improvements. GRAYSVILLE MINING & MFG. CO.

RUSSELVILLE, ALA., April 4, 1887.

Editor Manufacturers' Record:

Iron mines now being opened here, and a mill for sawing walnut timber is being built. It is said by experts that our iron is in inexhaustible quantities. R. J. NANCE.

To Build Roller Flour Mill.

HONEY GROVE, TEXAS, April 5, 1887.

Editor Manufacturers' Record:

A roller mill, 100 barrels daily capacity, will be built here immediately by a joint stock company. JAS. P. GILMER.

To Build a Belt Railroad.

MONTGOMERY, ALA., April 5, 1887.

Editor Manufacturers' Record:

The North Montgomery & Belt Railway & Manufacturing Co. has been organized. The company owns and controls 1,300 acres of land in and adjacent to this city. Its purpose is to give inducements to manufacturers. The belt railroad will be a steam standard gauge railway, for the purpose of transferring all freights from one line of railroad to another. \$260,000 will be spent within six months. J. A. GABOURY.

To Build a Large Hotel.

AUGUSTA, GA., April 7, 1887.

Editor Manufacturers' Record:

Thomas W. Coskery has commenced to erect a hotel on the old site of the Globe Hotel, which was recently destroyed by fire. His intention is to erect a first-class house, with all modern improvements, which will contain about 105 bed-rooms, exclusive of parlors and all other conveniences. The building will be five stories high exclusive of basement, with 51 feet on Broad and Ellis streets, extending 270 feet on Jackson street, in the most central part of the city. W.

Water Works to be Completed.

JERSEY CITY, N. J., April 7, 1887.

Editor Manufacturers' Record:

The Portsmouth (Va.) Water Works were bid in for a committee of 1st mortgage bondholders, who intend to finish them directly. C. D. WARD.

Will Start Steam Brick Works.

GOLDSBORO, N. C., April 9, 1887.

Editor Manufacturers' Record:

I have withdrawn from the firm of Griffin Bros. and taken the brick business. Will start another yard; steam power capacity 24,000 per day. Will also continue the hand-yard formerly run by Griffin Bros. W. H. GRIFFIN.

Cotton Mills to be Refitted.

WILMINGTON, DEL., April 11, 1887.

Editor Manufacturers' Record:

The old machinery at Elk Mills at Elkton, Md., will be thrown out and new put in, water-power repaired and engine and boilers overhauled, dye house fitted up; in fact, both mills then will be put in order and started as soon as possible on gingham, cotton damask, toweling, napkins, table covers, &c. I expect to move the machinery from Baltimore that is in the mill there. I also have a mill newly fitted up of my own here in Wilmington of nearly 7,000 spindles; cost about \$60,000. M. GAMBRILL.

STARKVILLE, MISS., April 7, 1887.

Editor Manufacturers' Record:

We have two creameries in operation here—one at the A. & M. College, the other the property of W. B. Montgomery.

There is talk of starting a creamery at Osborne, this county, but it is doubtful whether it will be established before fall.

A party from Madison Station, Miss., was here to-day inspecting our two creameries and says his people have their creamery building framed and have bought their machinery. Another gentleman was here recently from Houston, Texas, who intends to start a creamery there at an early day, and another was here yesterday from Aberdeen looking over our creameries, having an idea of establishing a private one for his own special use.

I might mention that near Okolona, Brown & Bro. have established a tile factory, and have more orders than they can fill. Another party speaks of starting one at Meridian, and is corresponding in reference to machinery. Some talk of one at Tupelo, Miss.

A national bank has been organized here. Officers elected to-day. Cash capital \$50,000. All home folks.

EDWIN MONTGOMERY.

Will Add New Machinery.*Editor Manufacturers' Record:*

GIBSONVILLE, N. C., April 9, 1887.

We have started a new mill at this place. Sixty horse-power Westinghouse engine, 75 horse-power boiler, running 48 looms, and propose putting in more in the near future. B. & J. A. DAVIDSON.

Rebuilding Saw Mill.

CAMILLA, GA., April 6, 1887.

Editor Manufacturers' Record:

The saw mill burned belongs to myself alone. I am rebuilding and will start up again in a day or so. C. W. COLLINS.

LITTLE ROCK, ARK., April 8, 1887.

Editor Manufacturers' Record:

A hotel of fifty rooms will be built at once by the Mountain Park Cottage Sites & Improvement Co. on Grande Roche mountain near Little Rock. Our capital stock is \$100,000. The mountain plateau is beautifully rolling, with one mile of bold picturesque cliffs 520 feet high overhanging the Arkansas river, and affording the most extensive stone quarries in the Southwest. The Little Rock & Mountain Park Railway Co. has just been incorporated for the purpose of opening these quarries and to promote passenger traffic between this city and the Mountain Park improvements. E. V. DEUEL, Pres.

[FOR OTHER LETTERS SEE PAGE 378.]

MINING NOTES.

By T. K. BRUNER, Raleigh, N. C.

BIG SURVEY AND OTHER LANDS.

The agent of Messrs. Bronson, Hoyt & McIntyre, the owners of the "Big Survey" and other lands in the Western counties of North Carolina, amounting to about one hundred thousand acres, states that it is the intention of the company to develop these lands. They propose to accomplish this by several means; by introducing a desirable class of immigrants for farming and stock raising, and by building saw mills, getting out timber, and by developing the various valuable mineral deposits found on the lands.

This great work is to be undertaken in a systematic way and on a scale commensurate with the amount of property to be handled. The company think it is entirely feasible under the improved industrial condition of the South, to accomplish much in this direction and they intend to show their faith in works during the spring and summer.

ORMOND ORE BANK.

The Ormond Ore Bank, or more properly speaking, the Ormond Ore Vein, is in Gaston county, and is from eight to fifteen feet thick. The ore is a manganiferous, hydrated hematite—turgite—and is sufficiently pure to be employed in the manufacture of spiegleisen, which is used in the manufacture of steel, by the Bessemer process. This ore is being mined and shipped to Pittsburgh, Pa. There is an abundance of such material in Gaston, and it bids fair to become an important factor in the manipulation of iron ores as its worth becomes known.

The iron ores of the State are coming more into use, and the beds are being examined with a view of introducing furnaces or for shipping purposes—all of which points to future operations on a broad basis.

FISHER HILL MINE.

It is stated that the Fisher Hill gold mine, in Guilford county, and but a few miles from Greensboro, is paying, or at least producing fairly. They have a good plant of machinery, including ten-stamp mill and the necessary amalgamating tables. A recent ten-day run yielded about seventy ounces, which represents more than a thousand dollars in money, or say one hundred dollars a day. This is a good average for ten stamps, and indicates that they are working a fair grade of ore. The bullion is sent to the Philadelphia mint. There are about 800 acres in the mining tract, which gives a long line of vein. The vein lies rather flat, much more than is usual in the region; it has been worked to a depth of one hundred and twenty feet, and laterally on the vein, about two hundred feet in the bottom level. The vein is of varying thickness, sometimes pinching to ten inches, and again, swelling to four and six feet. The material is brown

ore and sulphurets, the former free milling. Mr. Wallace Nichols is the superintendent in charge of the works.

MINOR NOTES.

The Genesee (Steele), in Montgomery county, is running right along with twenty stamps. They are reported as making money, but no official information can be had on this point. This is the property in which Mr. Warner, of Rochester, N. Y., is interested. The ore belongs to the complex class, and is considered rather difficult to treat.

The Ophir mine, also in Montgomery county, and near the Bright and other mines, is to be equipped with machinery this spring. They have a large amount of rather low grade, soft talco-slate ore, which may be regarded as free milling. Like all of the low grade slate ores of that territory, it will require careful management and work on a large scale to make it profitable.

The Cagle gold mine, in Moon county, is to resume operations this spring.

Messrs. Miller & Crowell, of Salisbury, have been exploring the Jake Fisher gold property, in Cabarrus county, and with some success. They find the ore to be rich on the surface, and they are now preparing to test the property at a greater depth.

MR. HENRY J. PHILPOTT, under the title of "Social Sustenance," will present in the May Popular Science Monthly an interesting and very intelligent discussion of the way in which other persons may affect our ability to make a living—either by hindering or by helping us in the process.

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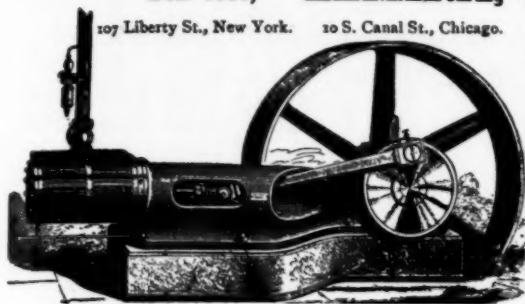
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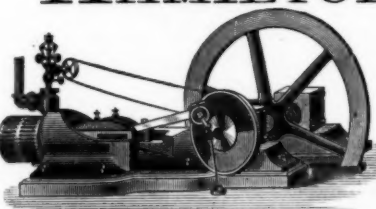
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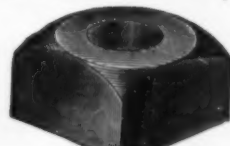
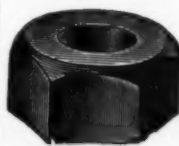
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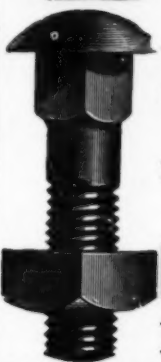
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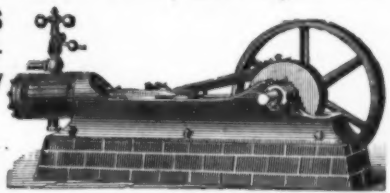
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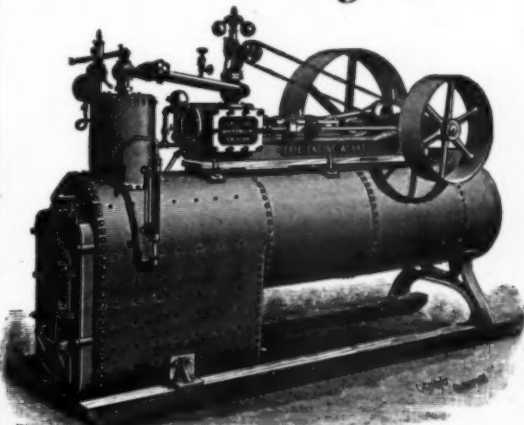
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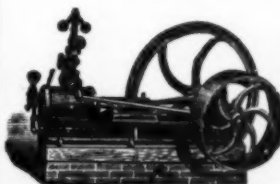
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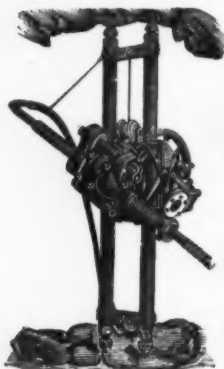
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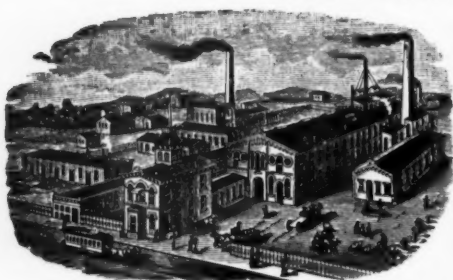
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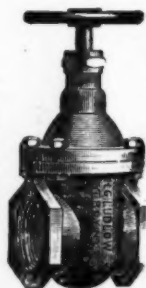
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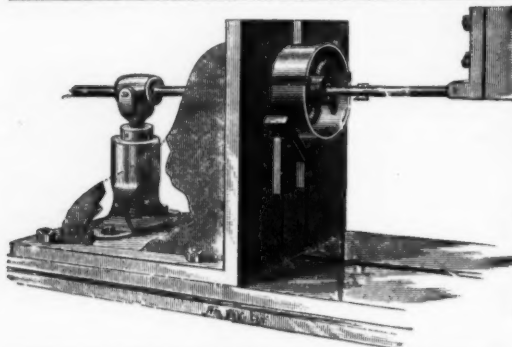
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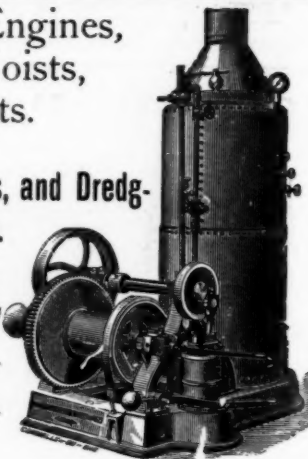
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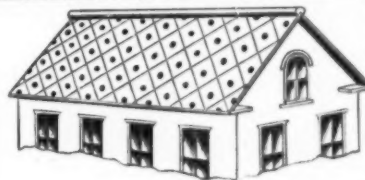
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STEEL CASTINGS of every description.

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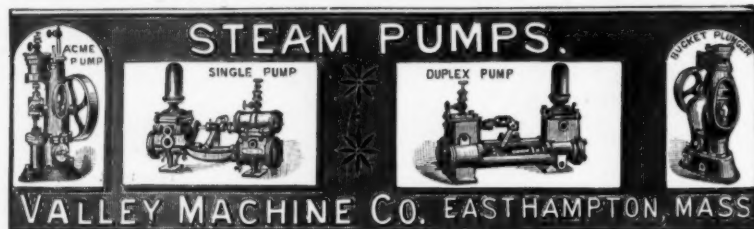
CHESTER STEEL CASTINGS CO.

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Works, Chester, Pa

DEAN BROS. STEAM PUMP WORKS.**WHY THIS IS PUT HERE!**

For the reason that if you are interested in raising water or other liquids by steam power, we wish to call your attention to the **NEW PULSOMETER,** THE CHEAPEST AND BEST STEAM PUMP IN THE MARKET. PRICES LOWER THAN ANY OTHER. More Efficient, Simple, Durable, and more Economical, both as to running expenses and repairs, than any other Steam Pump. For Mining, Railroad or Steamboat use, Paper Mill, Chemical or Gas Works, Tannery, Brewery or Sugar Refineries, Draining Quarries, Cellars or Plantations, Irrigating or Hydraulic Mining. Call or write for our new 56 page Illustrated Descriptive Book containing Full Particulars, Reduced Net Prices, and hundreds of A-1 Testimonials. Mailed Free. Pulsometer Steam Pump Co., 83 John Street, N. Y.

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PEERLESS OIL COMP'Y,
Manufacturers of Machinery, Engine AND Cylinder Oils,

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—A LONG FELT WANT SUPPLIED.—

For DITCHING, EXCAVATING

Loading Wagons

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**50 TO 100 PER CENT. SAVED
IN LABOR.**

Capacity of Machine 500 to 700 cubic yards per day. Self propelling. Easily moved. Being built entirely of steel, is both strong, light and a very substantial machine. Can be used on flat-boat for dredging ditches, irrigating or digging canals. Contractors and railroads promptly furnished with estimates for excavators of every description.

Address VULCAN IRON WORKS, Toledo, Ohio.*Buy "THE NEW SOUTH."***G. A. Crosby & Co.**

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It is a broad assertion, and we mean just what it implies, and nothing short of it. It will make better meal, grind faster, hold the dress longer, and in every way the best proportioned and best looking mill on the market.

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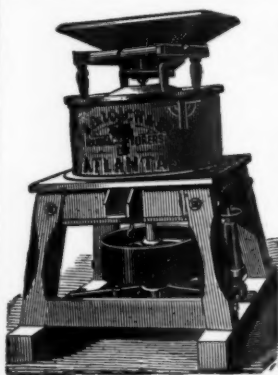
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The Largest Manufacturers of Well Sinking and Prospecting Tools.

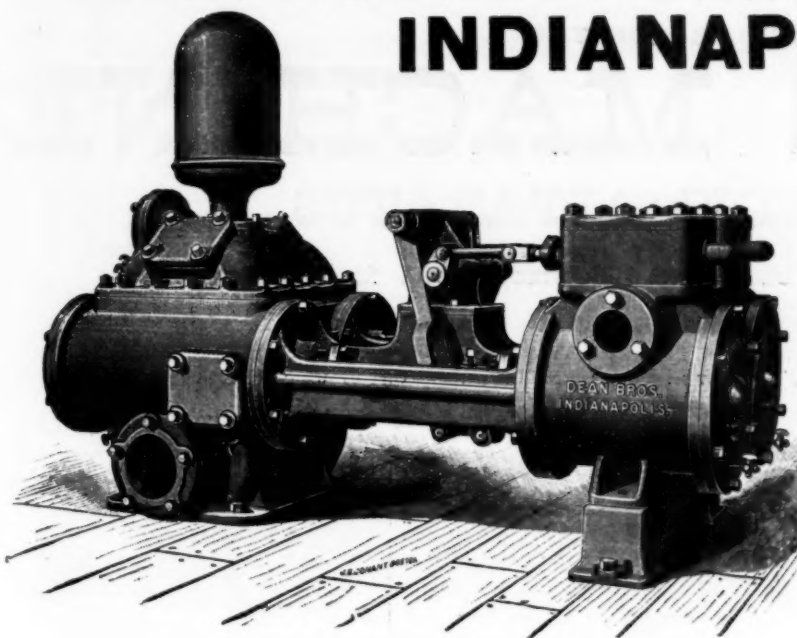
We have sunk 500 feet in 10 hours with the revolving process, 100 feet in 40 minutes by the jettison process, and 196 feet in 10 hours without removing the tools from the well by the hydraulic process. We have averaged 1 foot in 10 minutes, to a depth of 650 feet, with our diamond-pointed rock drills.

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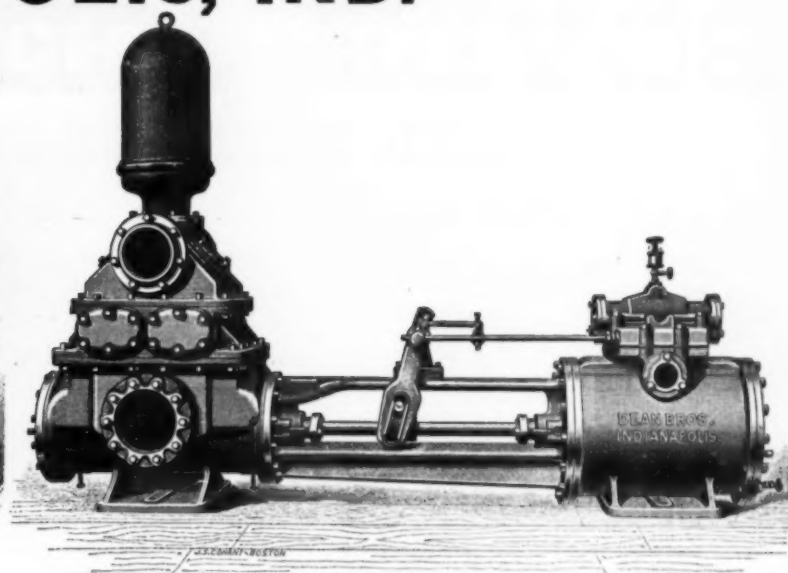
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INDIANAPOLIS, IND.

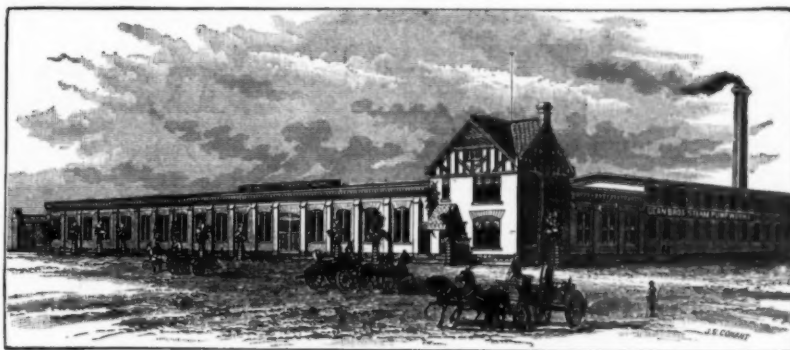


Duplex Pump.



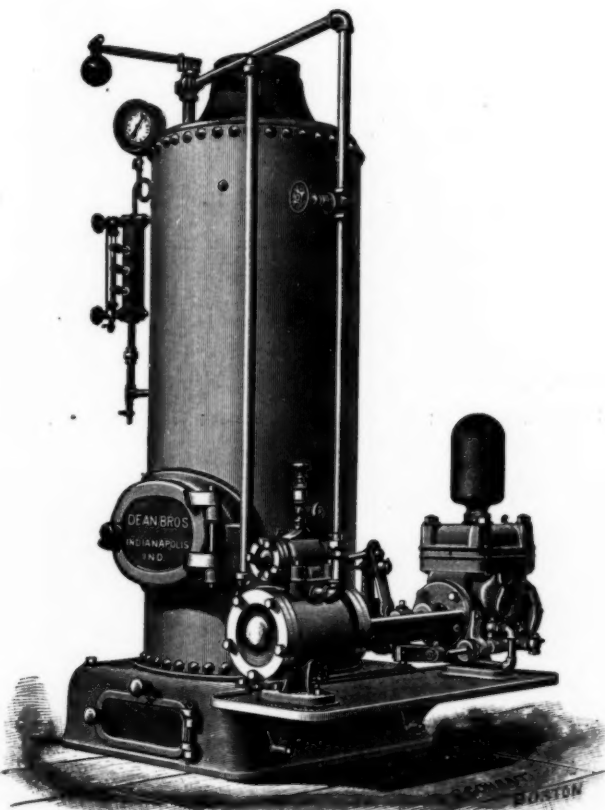
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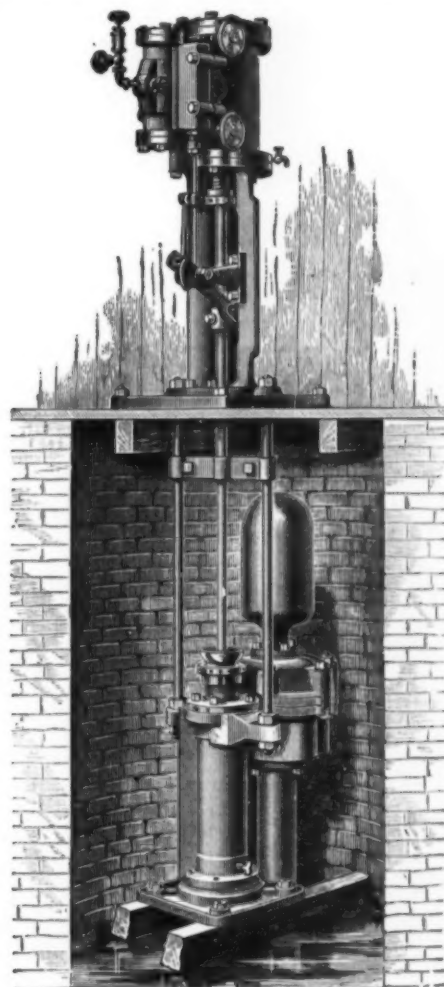
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Estimates for Ice or Refrigerating Machines furnished on application.

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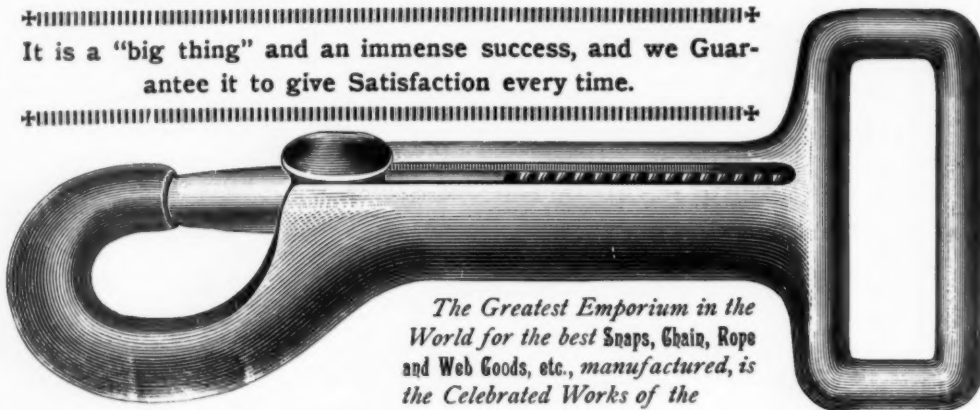
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The Covert "New" Snap.

It is a "big thing" and an immense success, and we Guarantee it to give Satisfaction every time.



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IRON REVOLVERS,
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ALL SIZES

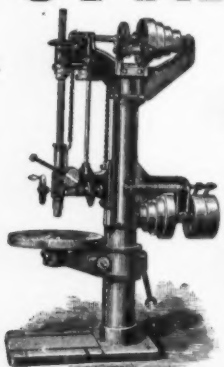
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SPARGER'S White Heat Steel Welding Compound.

- It is superior to borax or anything else.
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Any tool cracked in tempering can be welded by one application, and I positively guarantee that steel will not crack after it has been worked in the compound. Testimonials of its efficacy in hand from practical machinists in New York, Pittsburgh, Newark and other cities. Sold in bulk at 5 cents a pound. Address

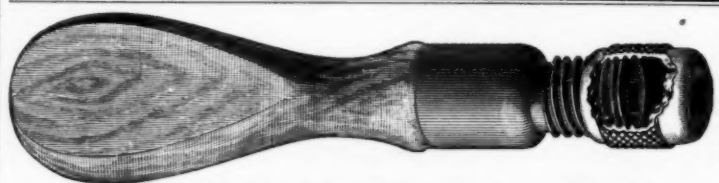
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THE BALZ PATENT TOOL HOLDER.

Will hold any tool having a shank adapted to the ordinary bit stock. Manufactured by the
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Roller Covering, Loom Pickers and Strapping.

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Full Line "Hick's" United States Standard Ring Travelers, Mill Wire Goods. Spring Cotters, Belt Hooks, Lacing, &c., kept constantly on hand.

Wrought Iron Pipe Fittings and Brass Goods. Southern Agents for the celebrated "B. C. & D. Oak Tanned Patent Lap Belting, Galvin Compound Wedge Gate Valve Imhauser's Watchman Time Detectors, Diamond Emery Wheel Machine Co., &c.

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Adopted by the Most Progressive Cities in the United States.

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Correspondence Solicited. RICHMOND, IND. Send for Catalogue.

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TINNERS' MACHINES AND TOOLS, FOR WORKING SHEET METALS, ETC.

SQUARING SHEARS, CIRCLE SHEARS, PRESSES, DIES, ETC.



Tinners and others, we offer you the best Snips ever made. We make five sizes:

No....	10	9	8	7	6 1/2	No....	10	9	8	7	6 1/2
Cut....	2 1/2	3	3 1/2	4	4 1/2	Price...	\$1.40	\$1.50	\$2.00	\$2.50	\$3.00
Weight	1	1 1/4	2	3	4	lbs. Postage	18	25	36	48	70 cts.

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Sole Manufacturers of the

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NO WEIGHTS, NO CORDS, NO PULLEYS,
NO BOX FRAMES.

Balances the Sash perfectly, and runs as Easily as Weights. Easily applied to any WINDOWS, and is Simple, Durable, Reliable and Practical in Every Way.

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Nickel Barn Door Hangers,

Ribbed Bessemer Steel Frames, Hot Bent.

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COLEMAN HARDWARE CO.

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LOOK THROUGH the advertising pages carefully. They contain the announcements of the largest and most reliable houses in the country manufacturing and dealing in machinery of all kinds, mill, factory, mine and railroad supplies, hardware, roofing, builders' material, etc. If in need of anything herein advertised, write to the advertisers for catalogues, prices, &c.

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A FINE OPPORTUNITY.—Wanted a partner with capital to start a daily paper in a booming Southern city with 12,000 population. Have a paying and prosperous weekly with between 3,000 and 4,000 circulation and best advertising patronage in the State. Good job office, with type, press and fixtures and paying patronage. Whole plant worth about \$5,000. Paper long established; demand for daily pronounced. A young man preferred, but a man with some capital is wanted who is willing to follow his money into the business and look after it. Address, E. A. O., care MANUFACTURERS' RECORD.

WANTED.—A practical pattern maker, capable of making ordinary drawings, with some experience in millwrighting and machine work; also, a practical man capable of selling and erecting wind-mills. Address, Progress Engine & Machine Works, Sumnerfield, Baltimore county, Md.

COTTON PRESS.—I have completed model of a cotton press which possesses substantial merit over any press ever put on market. The advantages are economy in packing power, dispatch of work and ease of management. Not being able to handle it, I desire to dispose of the invention. Correspondence solicited. A. H. Harrington, Harrington P. O., N. C.

WANTED.—A man capable of selecting, preparing and rolling in plug tobacco factory. Must be sober and bring good references. Address C. Whittier, Whittier, N. C.

WANTED.—A man with a small capital and thoroughly acquainted with furniture manufacturing, to take one-half interest in a factory now being built at Sheffield, Ala. Address Z. T. Spencer, Sheffield, Ala.

A PARTNER WANTED with \$3,000 to \$10,000 capital to assist in carrying on the business of a first-class machine shop, with good business prospects, located in Atlanta, Ga. Address all inquiries to Box 997, Atlanta, Ga.

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WANTED.—A situation by a thoroughly competent manager of the advertising department of a patent medicine or similar business. Long experience and first-class references. Address H. E. T., care Box 98, Atlanta, Ga.

A PRACTICAL Stove Manufacturer desires to organize a stock company in a growing manufacturing and commercial Southern city to manufacture stoves and fine castings. Corporations and capitalists who would take an interest, please address for particulars, Stove Manufacturer, care MANUFACTURERS' RECORD.

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HOW TO KEEP BOILERS CLEAN

And Prevent SCALING, FOAMING, BURNING. Price \$75.00. Removes Lime Oil, Magnesia, without use of Compounds.



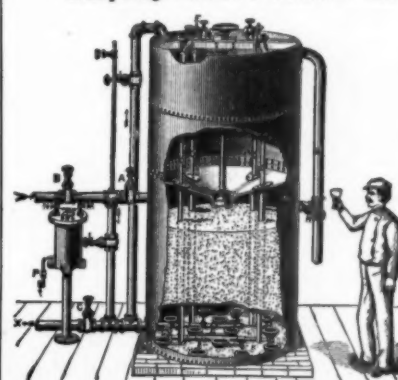
Hotchkiss Mechanical Boiler Cleaner. Illustrated in an eighty-eight page book, which will be mailed FREE, to any address, by JAS. I. HOTCHKISS, 68 JOHN ST., N. Y. Beware of imitations.

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Adapting Nature's Process—Endorsed by the Highest Authority.



A Perfect Water Purifying System. In constant use by Cities, Towns, Water Companies, Factories, Mills, Steam Boilers, Public Institutions, Private Residences.

Indispensable to Textile Manufacturers. Adapted to every condition requiring Clean, Bright Water in any quantity. Perfect in Operation, Quickly Cleaned Automatically, Reliable, Indestructible.

MUDDY WATER MADE CLEAN. HARD WATER MADE SOFT.

Organic and semi-soluble elements removed. Scale and Mud Deposits in Boilers Prevented. With hundreds of plants in operation, treating all kinds of water, our system HAS NEVER FAILED. Promised Results Guaranteed. Adopted by Somerville & Hattin N. J. Water Co.; City Water Co., Belleville, Ill.; Water Works, Charleston, W. Va.; Clark Thread Works, Newark, N. J.; Earl & Wilson, Troy, N. Y.; Norfolk & N. B. Hosiery Co., New Brunswick, N. J.; Victor Knitting Mills, and sixteen other knitting mills, in Cohoes, N. Y.; Hon. Daniel Manning, Albany, N. Y.; Western Steel Works, St. Louis, Mo., and hundreds of others. Representatives Agents Wanted. For Circulars, Prices, &c., Address

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The TERRELL COTTON MILLS, at Terrell, Texas, consisting of a two-story brick house 65x150 ft., situated on the Texas Pacific Railroad, and the machinery necessary for a 2,000 Spindle Mill, all in good condition and standing just as it did when the mill shut down three years ago. It was turning out about 1,200 yds of 8 oz. ducking when it closed. This is a fine opportunity for any one who wishes to engage in the cotton mill business in the South, as the above can be bought or leased on very favorable terms.

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For Sale Cheap ON LONG TIME.

- 1 32 in. x 32 in. x 9 ft. heavy, second-hand planer.
- 1 Davis Keyseater, 1/4 in. to 1 in., Keyseater, Bargain.
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Also, Shafting, Pulleys, Hangers, Belting, Belt Fasteners, Lace Leather, Belt Grease, Journal Grease, Pipe, Tubes, Fittings, Valves, Pipe Tools, Files, Bolts, Set and Cap Screws, Wrought Rim Pulleys, Sheet Gum and Packing, all kinds. Boiler Scale Preventive, Gardner Governors 1/2 in. to 4 in. in stock. Headquarters for Gas Engines. One Sturtevant Blower, Monogram Pattern.

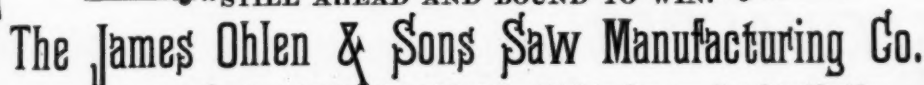
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Standard, Solid and Inserted Tooth Saws, Mill, Muley, Gang, Chain, Cross-Cut and Band Saws.

COLUMBUS, OHIO.

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 "I am running one of your Chisel-Tooth Saws. Have been working in saw mills for past five years, but never found a saw equal to yours. Please send me a catalogue. *W. A. Williams.*
 Wise & Nelson, Jo esboro, Ind., Feb. 1, 1887, write: "The 64-in. gauge solid saw is doing splendid work; inclosed find draft for same. Make and ship us 12 gauge, same hand as other, soon as possible.

B R Edwards, Jacksonville, Fla., writes: "Saw received. Has been running steadily and not made one bad line. Draft inc osed."

——The Above Cuts Show Our Champion Chisel-Too h Saw.——

It has been thoroughly tested on steam and friction feed, in all kinds of timber, and we guarantee to our patrons perfect satisfaction in every respect. Each set of teeth will cut from 100,000 to 250,000 feet. We advertise only practical possibilities, and stand by what we say, and guarantee that any saws bearing our trade mark (James Ohlen & Sons) are equal, if not superior, to any others in every respect, and will give satisfaction to those using them.

Write for Catalogue and mention this paper



FLORENCE LAND, MINING & MANUFACTURING CO.
Florence, Alabama.

Great Sale of Town Lots AT AUCTION!

APRIL 26, 1887, and CONTINUING FIVE DAYS.

4,000 Acres of Beautiful Building Lots to be Sold in the City of Florence, which now has 2,500 inhabitants.

30,000 Acres Fine Mineral Lands. Two 100-ton Blast Furnaces now in course of erection.

Water Works, Electric Light and Street Railroad Companies formed and stock all taken and to commence work at once.

TERMS OF SALE—One-fourth Cash, balance in 1, 2 and 3 years, with 6 per cent. interest.

FLORENCE

❁ FOR BEAUTY, HEALTH AND CLIMATE UNSURPASSED ! ❁

Is situated on North Bank of the beautiful Tennessee River, and 160 Feet above high water. Streets 100 to 150 feet wide and many finely PAVED. Fine Schools and Churches, and is only six miles from the famous BAILEY SPRINGS.

PAMPHLETS, GIVING FULL HISTORY OF CITY AND SURROUNDING COUNTRY, WITH BEAUTIFUL MAPS,
SENT FREE ON APPLICATION.

H. C. WOOD, Sec'y. W. P. CAMPBELL, Treas. W. B. WOOD, Prest. A. W. WILLS, Vice-Prest.

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TRADE NOTES.

OUR readers who are interested in steam pumps will find the new catalogue of Hughes Bros' Steam Pump Works, of Cleveland, O., of much interest. Illustrations are given of many styles of pumps adapted for all purposes—tank pumps, brewery pumps, mining pumps, fire pumps, &c. All pumps made by this house are fully warranted, and in their catalogue they state that they "are prepared to give bottom price on any pumping machinery."

THE American Supply Co., of Providence, R. I., have issued a well-printed and substantial book of nearly 300 pages devoted to illustrations, descriptions and prices of the great variety of goods they manufacture and handle. The index alone, giving their list of goods, covers nearly 18 pages. They are manufacturers of loom harness, reeds, oak tanned leather belting, factory leather of all kinds, raw hide and leather pickers, &c., and dealers in supplies for cotton, woolen, flax, jute and silk mills, and also machinists' tools and supplies of all kinds. Their catalogue is well worth a place in every factory and shop where these goods are ever needed.

THE Champion Iron Fence Co., of Kenton, Ohio, have just completed a large improvement of their works. New Corliss engine, boiler, new shafting, punches and machines have been added. These changes have been made to enable the company to keep up with their orders for fences, fire escapes and stairs, which have increased greatly during the past year. Their new spiral stairway has taken in the market wonderfully, because of its cheapness, simplicity and beauty.

THE Geo. F. Blake Manufacturing Co., of Boston, stands among the most prominent of New England concerns, and the pumps for every kind of use made at their works are found all over the world. Owing to increasing business, the company have just removed to more spacious quarters at No. 113 Federal street. The new store is 60x110 feet, and the company will have some 13,000 square feet of space, including a well-lighted basement, which will allow them to carry a larger assortment of finished pumps than ever before. The elevator will be run by electricity.—Scientific American.

WIDE-AWAKE boiler makers and machinery dealers are wanted by the Reliance Gauge Co., of Cleveland, O., manufacturers of the Reliance Safety Water Columns, sight-feed lubricators and engineers' supplies, to represent them in all the leading Southern cities. The products of this company rank as strictly first-class, while the company itself enjoys a high commercial rating. It will be found both creditable and profitable to represent them.

AMONG the recent large sales of safety water columns by the Reliance Gauge Co., Argyle Building, Cleveland, O., were fourteen "Mammoth" combined high and low water alarms with special trimmings to Messrs. Dick & Meyer, sugar refiners, Brooklyn, N. Y., who took three of the same kind of gauges on trial about six months ago. These safety water columns are rapidly growing in public favor, but must be seen to be fully appreciated.

THE Babcock & Wilcox Co., of New York, made the following sales of boilers during March:

	H. P.
Singer Mfg. Co., Montreal, Canada	152
United States Senate, Washington, D. C.	312
E. Jenckes Mfg. Co., Pawtucket, R. I.	240
Cardenas Sugar Ref., Cardenas, Cuba, (6th order)	208
Tenn. Coal, Iron & R. R. Co., S. Pittsburg, Tenn.	624
Gadsden (Ala.) Furnace Co., Gadsden, Ala.	604
Gordon, Strobel & Laureau, Limited, Philadelphia, Pa., (5th order)	480
The "Journal" Co., Kansas City, Mo.	200
J. Langdon & Co., Incorporated, Shamokin, Pa.	208
Metropolitan St. Railway Co., Kansas City, Mo.	600
Francis Axe & Co., Buffalo, N. Y., (3d order)	61
E. C. Knight & Co., Phila., Pa., (3d order)	480
Dalzell Axle Co., South Egremont, Mass.	122
National Tube Works Co., McKeesport, Pa.	156
Total	4,467

MESSRS. SCHLEICHER, SCHUMM & Co. send us the following: "The Gas-motoren-fabrik Deutz, of Deutz, Germany, who own the 'Otto' patents in Germany, and attracted of late attention by the large sizes of Otto engines furnished to city water works and electric light stations, have just obtained a decision in their favor in their suit against Moritz Hille, of Dresden, a manufacturer, and several of his clients and users of infringing engines. The decision establishes the infringement by the defendants, and orders them to discontinue the manufacture and use of the machines; also to account for damages. The Hille engine used the well-known Otto four-stroke cycle, and it is against its use that suits are pending against several other firms."

HIGH rents and taxes in New York are rapidly driving manufacturers to the nearby cities, and in a few weeks A. & F. Brown, manufacturers of pulleys, hangers and shafting, will have moved the principal portion of their works to Elizabeth, N. J. The machine shop of the old works on Lewis street, New York, which has been established there over 30 years, will be retained, but the balance of the works will be leased for other business.

THE Abendroth & Root Manufacturing Co. are meeting with great success in the sale of the Root Sectional Safety Boiler. Mr. A. S. Fiske, their agent at Cincinnati, O., has just reported a contract for two, 150 horse-power each, for the Brush Electric Light Co. at Louisville, Ky., and another of the same size is ordered for the Edison Electric Light Co. at Detroit, Mich.

THE perfection to which the manufacture of tackle blocks in this country has reached is exemplified in the product of the Bagnall & Loud Block Co., of Boston, which company, aside of its general commercial trade throughout the country, seems to almost monopolize the finely finished work that yachtmen require. The renowned yachts Puritan, Mayflower, Atlantic, Julia, Titania, Vanderbilt's new Alva and Astor's Nourmahal were fitted out by the Bagnall & Loud Block Co. Aside of the superior finish, fine iron work and durability of the blocks, their peculiar merit and valuable point consists in the patent bushing, which is self-adjustable and assures accurate and quick manipulation. The great specialty and pride of the company is in turning out the best blocks in the market. Their self-locking link-adjusting block, being easy to operate, is very popular. Their new style of circular hoisting blocks for steam vessels' use take the place of gins. They are great rope economizers and regarded as valuable adjuncts to steamers. The company take great satisfaction in referring to the superiority of their product, which they do not believe can be excelled, if equalled. They also have good reason to feel proud of the completeness of their block store at South street, this city. Besides blocks, the company manufacture a patent frictionless non-chokable pump. It is said to be the best practical diaphragm ever placed on the market, and cheap. It is simple in construction, the only wearing part being the diaphragm, which, in case of an emergency, could be taken out and substituted by a couple layers of duck canvas. It will pump anything. The business done by the company is immense, and the prosperity enjoyed by the gentlemen is in proportion to their great enterprise and superiority of product.—Marine Journal

THE Arctic Ice Machine Co., Cleveland and Cincinnati, are building 3 mammoth ice machines, which will shortly be shipped to Nashville, Cincinnati and Iowa. 28 machines have been built and sold by this well-known concern so far this season, which indicates that business is pretty lively with the Arctic Co. The 75-ton machines manufactured by the Arctic Ice Machine Co. are magnificent specimens of engineering skill, and work like a charm, it is said.

WE call attention to the advertisement of David Boyle, patentee and builder of the Boyle ice machine and refrigerating apparatus, 521 W. Monroe street, Chicago, Ill. Mr. Boyle has devoted the past fifteen years of his life to the study and improvement of this class of machinery, and the history of his experience has shown him to be a gentleman of wonderful perseverance and pluck. 124 of the Boyle machines have been sold up to date, and every machine is in successful operation to-day, and many concerns using these machines have placed their 2d, 3d, 4th, 5th and even 6th orders as the demand for their product increased. The Birmingham Ice Factory Co. have just placed their 6th order for Boyle machine, this time a 30-ton machine (now being built), and the Nashville Ice Factory Co. are having one of the same size erected—their 3d order. The Boyle ice and refrigerating machines are scattered all through the South and are very popular wherever used. They are simple, durable and economical. Below we publish two letters recently received by Mr. Boyle from Atlanta, Ga., and Pine Bluff, Ark. Parties interested in ice or refrigerating machinery will do well to correspond with Mr. Boyle and get a complete list of all machines in use, references, etc.: OFFICE OF THE ATLANTA CITY BREWING CO., ATLANTA, GA., Dec. 15, 1886.

David Boyle, Esq.,

521 W. Monroe St., Chicago, Ill.

DEAR SIR—Replying to your favor of 10th inst., we are pleased to state that we have had one of your 10-ton ice machines in constant work during the past eight years. The cost for repairs has been trifling, and the machine seems as good to-day as ever. It has always produced more than its rated quantity of superior ice from distilled water. Your machine has been of great advantage to our business, and the least we can say is, that we are thoroughly satisfied with it, and that we believe it is superior to any other in the market to-day. Yours truly,

HENRY G. KUERT, President.
CHAS. BEERMAN, Genl. Manager.
R. L. SMITH, Supt. Ice Factory.

PINE BLUFF, ARK., Feb. 5, 1887.

Mr. David Boyle,

521 W. Monroe St., Chicago, Ill.

DEAR SIR—We have been trying since last fall to find out all about the latest makes of ice machines, and have examined several in our rounds of both absorption and compression construction, but do not consider any of them equal to the improved Boyle machine. We have been running the 5-ton machine you sold two years, and it has given us perfect satisfaction; it makes 1,500 pounds more ice than you guaranteed it to do. It runs very economically, only requiring fuel enough to make the distilled water sufficient to make the ice with. Any one with ordinary sense can run it. Hurry up the new machine you are making for us. Yours truly,

DISTILLED WATER ICE CO.

THE Page Belting Co., of Concord, N. H., have issued two very neat and attractive pamphlets—one being a catalogue of their leather and rubber belting, lace leather, &c., and the other an instructive little work on "The Kinds and Grades of Belting to Use for Different Kinds of Work." In this latter book they give many points of value to all users of belts—such as "Mistakes made by users of belting," "Arrangement of shafting and pulleys," "Purchasing belts," "Rules for ascertaining length and width of belt required," &c. The catalogue will be found usually complete in every detail. Both are for free distribution.

THE New York and Brooklyn bridge arch in York street, Brooklyn, has been leased by the Clayton Air Compressor Works, of 43 Dey street, New York, for use as a warehouse for the storage of their stock of air compressors of the larger sizes, as the pressure of orders at their works requires all the available floor space.

Literary Notes.

THE complete novel in the May number of Lippincott's Magazine will be furnished by Captain Charles King, U. S. A., the popular author of "The Colonel's Daughter," "Marion's Faith," and other tales of army life. It is entitled "The Deserter," and is equal in interest to any of its predecessors.

SHOPPEL'S MODERN HOUSES.—This is a fine quarterly publication, edited by R. W. Shoppell and S. S. Covert, and published by the Co-operative Building Plan Association, No. 191 Broadway, New York. The number for January contains a great variety of designs for houses, etc., the particulars of each including elevation, plan and perspective view; also estimate of cost. In no department is the improvement of the public taste more conspicuous than in that of house building, as a walk along any of our residence avenues will convince the most superficial observer. It may be said that the principal change has been wrought within the narrow limit of ten years. A comparison of the new with the older houses on any suburban avenue will suffice to show the fundamental character of the innovation. A square box, often overloaded with meaningless ornament, surmounted by a cupola and fronted with a row of wooden columns supporting nothing was twenty years ago the owner's highest idea of a genteel home. The great change is in a reversal to the more picturesque forms of the old houses of Europe, which with their diversities of color and form supply elements of the picturesque at every turn. Everyone must feel that the new style, while helping the landscape, is a juster adaptation of means to ends than that which it has supplanted. In the January number some forty-nine designs for dwelling houses occur, the cost ranging from \$1,000 up to \$12,000.—American Grocer.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date April 5, 1887. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Brickenstein, L. C., and C. A. Babendreier, Baltimore, Md. Device for decanting liquids	360,557
Bugg, O. T., Louisville, Ky. Cotton harvester	360,509
Clark, W. B., Covington, Ky. Automatic brake	360,419
Day, C. A. T., Morganfield, Ky. Sawdust-carrier	360,768
Dickey, M. F., Yemassee, Texas. Jar-fattener	360,515
Emley, J. E., Weatherford, Texas. Apparatus for recutting files	360,517
Greer, J. W., Austin, Texas. Car-brake	360,803
Helm, J. H., Matthews, N. C. Combined washing and wringing machines	360,524
Hewlett, M. J., Cumberland City, Tenn. Car coupling	360,693
Jones, Z. F., Scottsville, Va. Nut lock	360,699
Jowell, G. R., Thorp's Springs, Texas. Milk cooler	360,808
Light, H. B., Simpson's, Va. Tobacco conveyer	360,598
Linder, P. P., and R. P. Bujant, Jacksonville, Ala. Cattle-guards	360,599
McClelland, J. A., Louisville, Ky. Treating and ornamenting pyroxyline compounds	360,811
McDowell, J. E., and T. Medford, Huntington, W. Va. Trunk attachment	360,806
Miller, T. S., The Grove, Texas. Spoke-socket for vehicle wheels	360,812
Miller, W. C., Wortham, Texas. Slicing machine	360,715
Philbrick, J. J., Mobile, Ala. Stave planers (2 patents)	360,616
Rabb, W. S., Winstonsborough, S. C. Hoe blade and fastening	360,619
Rogers, C. W., Baltimore, Md. Machine for making leather cruppers	360,730
Spanenberg, R. F., New Orleans, La. Brush for gin saws	360,486
Sweeney, J. M., Wheeling, W. Va. Rudder for boats	360,488
Tabony, J. H., New Orleans, La. Telephone receiver	360,626
Tappey, W. H., Petersburg, Va. Fluid compressor	360,549
Wayland, Ellis, Cent, Ky. Churn	360,636
Weiler, G. P., Louisville, Ky. Stencil plate	360,637
Williamson, J. A., Jr., Rupee, Texas. Car-coupling	360,546
Wright, W. A., Cave Spring, Ga. Extension leveling rod (2 patents)	360,836

A. P. THAYER,
Solicitor of U. S. and Foreign
PATENTS,
No. 86 Astor House, New York.
Experience of Over 20 Years.

Will Erect a 75-Ton Smelter.

HOT SPRINGS, ARK., April 7, 1887.

Editor Manufacturers' Record:

The Phoenix Gold & Silver Mining Co., of Hot Springs, Ark., have purchased from the Bartlett Smelter Co., of Portland, Me., a 75-ton smelter with a 40 light electric plant, which is now on the way here, and will be erected at the mines, 23 miles from Hot Springs, where we have fine water privileges and plenty of timber. We have built several dwelling houses for our men, and are now building a boarding house to accommodate 80 men, which will be finished in the course of a week or ten days. We are running two tunnels—one called the Accident, which is 140 feet deep, in which we made a handsome strike 4 days ago in sulphuretted ores, which run very high in gold, and the other, a quarter of a mile from the Accident, called the Arkansas Traveler. We are in 50 feet and are now sinking a shaft, and find that the ore grows richer as we go down on it. Aside from that we have the finest assay laboratory in the State.

OTTO A. PLANER, Sec.

To Erect a Wheelbarrow and Refrigerator Factory.

IRONTON, OHIO, April 6, 1887.

Editor Manufacturers' Record:

We have organized a company at Decatur, Ala., to manufacture sash, doors, blinds, wheelbarrows and refrigerators, and will also have a saw mill in connection with our factory, so as to saw our own lumber. The president of the company is W. E. Forest, of Decatur, Ala.; the secretary and treasurer is E. C. Payne, of Williamsport, Pa., and the general manager is J. D. JERVIS.

To Build a Saw Mill.

JACKSON, TENN., April 9, 1887.

Editors Manufacturers' Record:

I am going to build a large double saw mill at Shandy. Have all the machinery here and only waiting for the railroad company to put in spur track, to build and go to work. In connection with the saw mill will have a shingle mill, lath machine and corn rock. Capacity of mill 20 to 25 M feet per day, 40 horse-power engine and 60 horse-power boiler.

S. R. CONGER.

Broom Factory.

MARSHALL, TEXAS, April 5, 1887.

Editor Manufacturers' Record:

H. E. Carter and J. H. Copeland have bought the machinery for a broom factory, which will be in Marshall, to manufacture all the corn which can be raised in Harrison county, etc.

H. E. CARTER.

A \$150,000 Hotel to be Built.

TAMPA, FLA., April 4, 1887.

Editor Manufacturers' Record:

A stock company of our leading citizens has been organized for the purpose of building a 200 room tourist hotel to cost \$150,000. J. A. Wood, of New York city, (76 Chambers street) has made plans and will supervise the erection of the building. For any details address him.

W. N. CONOLEY,
Ed. Journal.**To Develop Manganese Lands.**

CLIFTON, W. VA., April 1, 1887.

Editor Manufacturers' Record:

We have leased lands in Virginia and are now building machinery to take out and work the manganese ore.

REDMOND & LERNER.

PERRY, GA., April 8, 1887.

Editor Manufacturers' Record:

I contemplate putting up ice works at this place. I want to go to work by the first of May.

JAMES N. TUTTLE.

To Build 100-Ton Furnace.

FLORENCE, ALA., April 4, 1887.

Editor Manufacturers' Record:

The stock has been taken for the W. B. Wood furnace, of 100 tons capacity. Work is to be commenced immediately. Contract for building will be let by 15th instant. Three brick yards have commenced work. 300 hands and 40 teams at work on the streets and avenues.

W. C. SHERROD.

To Start Brick Works.

ATHENS, ALA., April 4, 1887.

Editor Manufacturers' Record:

I will start a brick yard at Decatur, Ala., April 15. I expect to make tile afterwards, if the clay is suitable. We contemplate building a cotton warehouse 80x330 feet here this summer, with a capital of about \$10,000.

W. H. SYKES.

To Erect a \$25,000 Building.

ANNISTON, ALA., April 9, 1887.

Maj. D. F. Constantine's building will be 120x55 feet, 4 stories, Bedford stone front, and will cost \$25,000. It is to be built immediately. CHISOLM & GREEN, Architects.

New Machinery.

GRAHAM, N. C., April 9, 1887.

Editor Manufacturers' Record:

I am building an extension of 120 feet by 50 feet, 2 stories high. Will add 97 new looms and about 2,400 spindles. Tenement houses are near all completed and new building will be completed in May. Will add also one 150 horse-power Reynolds-Corliss engine, etc.

L. BANKS HOLT.

HOT SPRINGS, ARK., April 6, 1887.

Editor Manufacturers' Record:

We are engaged in mining in Montgomery and Garland counties, Ark., and have two boilers and engines on the way for the purpose of developing our mines—one 40 horse-power with engine and saw mill to cut lumber, and one 30 horse-power with hoisting engine, pump, &c. Our prospects are very favorable, and we expect to engage largely in mining. The business office of the company at present is at Hot Springs, but the base of operation, or at least the mines, are at Crystal Springs, 20 miles west of Hot Springs.

ACCIDENT ORE MINING CO.

S. J. McGEHEE, Sec.

LOUISVILLE, KY., April 8, 1887.

Editor Manufacturers' Record:

This company is now constructing a branch road from Corbin, Ky., a station on its Knoxville line, to Pineville, Bell county, Ky., about 30 miles. This branch will be extended to a connection with a branch of the Norfolk & Western Railroad at some point in Southwestern Virginia.

LOUISVILLE & NASHVILLE R. R. CO.

M. H. SMITH, Vice-Pres.

WEST POINT, GA., April 9, 1887.

Editor Manufacturers' Record:

Myself and W. H. Burgess and associates have organized the Union Milling & Manufacturing Co., capital stock \$50,000, with privilege of increasing to \$500,000. The business to be conducted will be (1) a grist mill, (2) a fertilizer factory, (3) a public ginny, and (4) the manufacture of cotton batting and other cotton goods.

W. T. HUGULEY.

MARION, VA., April 5, 1887.

Editor Manufacturers' Record:

We have some of the best iron properties, (near this town) in the State. Mr. Wm. Faux, of Philadelphia, Pa., has opened several banks of iron ore and is shipping to Philadelphia. Labor is cheap, and all classes of iron ore; quantity inexhaustible.

R. J. HALLER.

Electric Light Plant to be Erected.

PETERSBURG, VA., April 5, 1887.

Editor Manufacturers' Record:

The contract for lighting our city with the electric light has been awarded to Mr. Moses Joy, Jr., who will use the Thomson-Houston system.

E. A. GOODMYER.

Enlarged Tobacco Factory.

WINFIELD, W. VA., April 8, 1887.

Editor Manufacturers' Record:

We have enlarged our factory to 110 feet long, have put in machinery for manufacturing smoking tobacco and expect soon to commence making cigars.

MIDDLETON, ROBERTS & CO.

To Build a Railroad.

CLEVELAND, TENN., April 9, 1887.

Editor Manufacturers' Record:

There was a mass-meeting of the citizens of Bradley, Meigs and Rhea counties held at Dayton, Tenn., last night, for the purpose of taking steps toward the building of a railroad from here to Dayton, a distance of 26 miles. Col. Ferguson was elected president, and H. W. Horner, secretary. A board of directors were elected, and the survey will commence soon. The road is now a certainty and when built will increase our population 20,000.

WINSTON McNABB.

To Build a Bagging and Cordage Factory.

GALVESTON, TEX., April 6, 1887.

Editor Manufacturers' Record:

The Galveston Bagging and Cordage Company will probably be organized this week, with \$500,000 capital. Buildings and machinery will be secured as soon as practicable.

ADOUÉ & LOBIT.

To Build 10 Miles of Railroad.

NASHVILLE, TENN., April 9, 1887.

We have formed a company known as the Overland Railway Co., to construct 10 miles of city and suburban passenger road to be propelled by dummy engines or electricity. Work has begun.

JAMES E. CALDWELL, JR.

TROY, ALA., April 5, 1887.

Editor Manufacturers' Record:

Messrs. Folmar Bros. are preparing to erect an elegant opera house, and will need furniture for the same, within a month or six weeks. Coal and iron deposits have been found near Josie P. O. in this county.

J. W. HENRY.

A Cigar Factory.

MOBILE, ALA., April 7, 1887.

Editor Manufacturers' Record:

We have recently added to our wholesale grocery department, a cigar factory under the management of the best practical cigar man in the South. Will soon be in full operation working perhaps over 100 hands.

MICHAEL & LYON.

AUSTIN, TEX., April 5, 1887.

Editor Manufacturers' Record:

The Capital City Refrigerating Company has been formed, and we will commence manufacturing as soon as all necessary arrangements have been made.

GEO. A. BRUST, Sec'y & Treas.

Additional Machinery.

FAYETTEVILLE, TENN., April 6, 1887.

Editor Manufacturers' Record:

We are putting in additional machinery and erecting a new saw mill. We are going to add more rolls and other machinery soon.

HARMS BROS.

Information Wanted.

CEDARTOWN, GA., April 4, 1887.

Editor Manufacturers' Record:

I am operating one iron ore bank, getting out about 40 tons per day of the finest quality of ore. A. G. West is preparing to put up another furnace at this place, capacity 100 tons per day. I have 4 very fine banks of manganese ore that I will operate as soon as I can find a place to dispose of the ore at a reasonable profit. Will you please refer me to some one who is dealing in manganese ore.

L. G. RAY.

To Manufacture Medicines.

AUGUSTA, GA., April 9, 1887.

Editor Manufacturers' Record:

I have started the Davenport Manufacturing Co., not incorporated, but probably will be in October next. We manufacture medicines. Capital \$5,000, but may increase to \$10,000 in October.

J. B. DAVENPORT.

WACO, TEXAS, April 2, 1887.

Editor Manufacturers' Record:

We contemplate adding 1500 spindles and eighty looms to our plant for the production of standard sheetings and shirtings.

C. A. KING, Supt. Waco Cotton Spg. Co.

HAW RIVER, N. C., April 9, 1887.

Editor Manufacturers' Record:

I am not going to build a new grist mill. Am going to tear down an old one, and erect on the foundation a carpenter shop, with saws, wood machinery, &c.

THOS. M. HOLT.

Rebuilding Planing Mill.

GAINESVILLE, TEXAS, April 5, 1887.

Editor Manufacturers' Record:

I am now rebuilding and will have my planing mill running in about 30 days after the fire.

J. D. BUCKLEY.

Rebuilding Distillery.

NEW ORLEANS, LA., April 9, 1887.

Editor Manufacturers' Record:

We are now rebuilding our distillery on a more elaborate scale, and will be in operation within 60 days.

NEW ORLEANS PINWOOD DISTILLING CO.

ANNISTON, ALA., April 4, 1887.

Editor Manufacturers' Record:

We have moved our steam brick works from Ivorydale, Ohio, to Anniston, Ala., where we intend to make a fine grade of stock and fancy brick; also fire brick. Capacity 25,000 a day, with drying capacity for 100,000.

W. D. GATCHELL & SON.

BRUNSWICK, GA., April 4, 1887.

Editor Manufacturers' Record:

We have arranged to manufacture the Colville patent folding crate, in this city. We have building ready, 25-horse-power engine and boiler on the ground, and working drawings for the special machinery to be used in the construction of the crates, and a contract to build the same will be let at once. It will take us about 3 months to get in full working order.

COLVILLE & DEXTER.

An Excelsior Factory.

ATLANTA, GA., April 8, 1887.

Editor Manufacturers' Record:

Chas. Cohen has purchased the necessary machinery to manufacture excelsior at West End. Geo. H. Sullivan, Ellzey, Fla., has purchased machinery of Russell & Co. to rebuild his saw mill, reported in your last issue as burned.

J. W. DUNN, Agent.

FLOYD C. H., VA., April 4, 1887.

Editor Manufacturers' Record:

There will be started very soon an axe, handle and spoke factory by Wingfield Scott.

WM. PENDLETON.

WE are indebted to the Daily Commercial, of Pensacola, Fla., for a copy of the "Proceedings of the American Shipping & Industrial League" held at Pensacola last November.

BAKERSVILLE, N. C., March 24, 1887.
Editor Manufacturers' Record:

Since I wrote you some months ago I have had the opportunity to note the great good the MANUFACTURERS' RECORD is doing, both in the North and South. Having occasion to pass through several States, I found the MANUFACTURERS' RECORD was taken by many of the enterprising business men. From its pages I learned where I could purchase late improved machinery, and also learned where such machinery was wanted; the result was the purchasing of several thousand dollars' worth in Worcester, Mass., and the fitting up of a machine shop in Milledgeville, Ga. I am now to purchase about fifteen thousand dollars' worth more for Georgia. I believe from observation that the Southern people are great losers by purchasing second-hand machinery; in many cases it is like throwing away the money invested. In one shop in Georgia there are fifteen men employed, all using poor tools. With late improved tools ten men could do the same work with much more satisfactory results, thus saving in a short time sufficient money to buy good tools. By using improved tools there is also a great saving of power, full one-third.

S. WORTHEN.

LITTLE ROCK, ARK., April 5, 1887.
Editor Manufacturers' Record:
The sewing machine factory, I think, will be started here this spring, the Manufacturers' Aid Association having agreed to give them \$10,000 on completion of factory to employ 50 men. There is also to be started here by fall a large and complete cotton mill, for domestics and prints; also an oil mill of the latest improvements by the new process of reducing seed to oil also the Decatur Wagon Works, besides a local concern of \$50,000 capital, to build wagons, buggies and other rolling vehicles; also mammoth machine works by the Gould interest; also a ginners and pickery of most approved machinery.
FRED. HANGER.

HOT SPRINGS, ARK., April 7, 1887.
Editor Manufacturers' Record:
 Our company is the Consolidated Mining & Reduction Co., authorized capital stock \$10,000,000. Own 120 mining claims in Garland, Montgomery and Polk counties. Are working 40 men, preparing to erect chlorination works; also 10-stamp mill on free gold ore.
 WM. MONTGOMERY.

LIBERTY, VA., April 12, 1887.
Editor Manufacturers' Record:
 We are putting up another factory of large capacity, and will in future manufacture smoking and fine cut tobaccos.
 BOLLING, WRIGHT & Co.

The council have appropriated \$20,000 for gas works, and contemplates improving the water works at considerable cost some time in the near future. R. V. BARKSDALE.

I am erecting still and refinery for distilling coal tar and refining natural asphaltum; also machinery for saturating roofing and building felt.

J. W. BYRNES.

K. E. Conant is now putting in place a brick and tile machine at this place.

THE April Pansy embraces in its contents stories, poems, sketches, historical and biographical, teeming with present truths and pulsing with life adapted to the needs of its every reader. The Easter poem, as well as the paper on "Some Remarkable Women," are of importance and interest—the former has been adapted for a recitation, and the latter being a sketch of Frances E. Willard, with a good portrait. Illustrated throughout. \$1 a year. Boston: D. Lothrop Co.

When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern conveniences.

Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the Grand Union Hotel than any other first-class hotel in the city. †

THE American House, Boston, needs no recommendation to the generality of travelers, but it may not be amiss to inform those who are contemplating their first visit to the "Hub" that no hotel in that city is better than the "American." It is conveniently located to all lines of travel as well as the business portion of the city, and no effort is spared to maintain the high rank the house has held so long.

THE Palace Hotel, Cincinnati, Ohio, is the best, finest furnished and most complete \$2.00 hotel in America. 250 rooms; 140 front rooms. Complete fire apparatus and iron balcony fire-escapes.

The Machine Tool Business of E. P. BULLARD,

—AND THE—
Bridgeport Machine Tool Works,

Established at 14 Dey Street, in 1875,
has been removed to the new and
commodious stores

No. 72 Warren St. & 62 College Place,

**Near Chambers Street Station of
the 6th Avenue Elevated R. R.**

Send for new list of tools for immediate delivery.

New York, April, 1887.

A BUREAU OF INFORMATION.
THE ONLY PUBLICATION OF ITS KIND.

The object of this publication is to furnish information in *advance of contracts*, to Architects, Builders, Contractors, Decorators, Painters, Roofers, Manufacturers, Producers, Investors, Bankers, Plumbers, Gas Fitters, Sewer Builders, Bridge Builders, Insurance Men, Real Estate Men, Lumbermen, Foundrymen, Hardware Men, Iron Men, Railroad Men, Supplymen, Etc.

No one of the above named can afford to do without this **Advance Information**.

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First National Bank.

Will answer promptly all inquiries in regard to Nashville, Tennessee, and her many advantages as a large Commercial and Manufacturing City.

The directors and officers of the Bureau of Information are as follows: J. L. Weakley, of Weakley & Warren, Wholesale Furniture Manufacturers. W. P. Rankin, of Rankin Manufacturing Company, Wholesale Clothing Manufacturers. C. F. Ordway, of Hall & Ordway Manufacturing Company, Wholesale Boot and Shoe Manufacturers. Wm. Simmons, of Simmons & Phillips, Contractors and Builders. H. J. Kemker, of Kemker-Woolwine Candy and Cracker Company, Wholesale Candy and Cracker Manufacturers. B. G. Wood, Machinist and Boiler Maker. H. W. Butteroff, of Phillips & Butteroff Manufacturing Company, manufacturers of Stoves and Marbleized Iron Mantels. W. M. Cassetty, of Cassetty Oil Company. Wm. Stockell, president, ex-Chief Nashville Fire Department. H. B. Grubbs, 1st vice-president, of H. B. Grubbs Manufacturing Company, Wholesale Cracker and Candy Manufacturers. W. G. Sadler, 2d vice-president, Secretary of Nashville Fertilizer Company. Jo. B. Morgan, treasurer, of Morgan & Hamilton Wholesale Paper Company. W. G. Davis, secretary, formerly General Agent Louisville & Nashville Railroad Company.

This is the latest and most improved combined Punch and Shear, being the only one that the operator can stand by his work and handle his lever, being in position to handle both at the same time.

A full line of Gunter Hooks, Ice Tongs and Children's Carriage Springs. Write for prices and circulars.

The Woodruff's Patent Celebrated American Suspending Trough Hanger. The best in the world.

Manufactured by GEO. W. HEARTLEY, Toledo Spring & Variety Iron Works, 303 St. Clair Street, Toledo, Ohio.



The illustration shows a heavy-duty mechanical device, a combined Punch and Shear. It has a large, dark, cast-iron body with a prominent handle on the right side. The words "LITTLE GIANT" are embossed on the front, with "PUNCH & SHEAR" below it. The device is mounted on a base and has various adjustment points and a lever system.

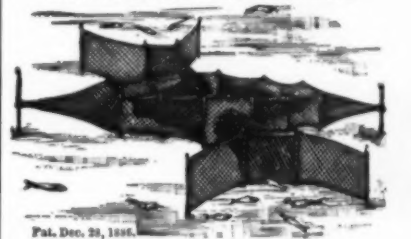


Prevents Soot, Leaves, Bugs,
Caterpillars or dead Birds
from entering the Cistern.
It is the Cheapest and
Best Filter ever made.
It will not clog up.
Always set for use.
Prices and Descriptive
Circulars furnished on application.

THOMAS LEE,
Patentee and Sole Manufacturer,
46 and 48 Race St., Cincinnati, O.



Pat. Dec. 28, 1894.



J. S. JOHNSON & CO.
Manufacturers Twines and Netting,
121 South St., BALTIMORE.
Write for Description and Prices.

ICE MACHINE.

The advertiser, owning a first-class Ice Machine, desires a party to take an interest in same and erect it in any good Southern town. Party taking interest to manage the business, or if stock company is organized, owner will sell and take stock.

**Address P. O. Box 249,
KANSAS CITY, MO.**



BUFFALO HAMMER CO., Buffalo, N. Y., U. S. A., Manufacturers of a full line of
Solid Cast Steel Hammers, Sledges, Mauls,



RAILROAD TRACK TOOLS. &c.

Every Hammer or Tool having our name is fully warranted. Catalogues and discounts sent on application.

BAGNALL & LOUD BLOCK CO. BOSTON, MASS.

Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED and Iron Bushed Rope and Iron Strapped

TACKLE BLOCKS.



Improved Self-Adjusting Roller Bushed Iron Sheave.

Send for the Celebrated
STAR BRAND.

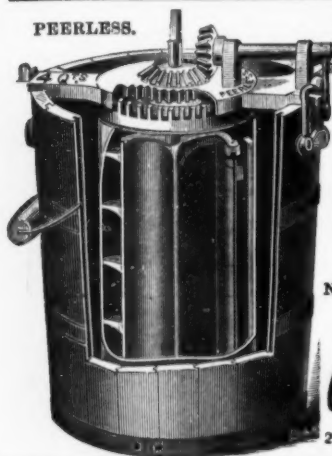


Improved Harcourt Patent Block.

Send for Catalogue
 No. 5.



Improved Self-Locking Link Snatch Block.



PEERLESS.

The Gooch "Peerless" And "Giant" Freezers.

OUR FREEZERS STAND UNRIVALED.

THE BEST GOODS EVER MADE.

Superior in Every Particular.

No other Freezers ever had such a sale. Send for Price-List and Discounts.

PRICES REDUCED FOR 1887!

MANUFACTURED BY THE

GOOCH FREEZER CO.

28, 30, 32, 34, E. Ninth Street,
 36 and 38

CINCINNATI, O.



GIANT

Cleveland Machine Co.

**SUPERIOR
 OLID
 STEEL
 HEARS.**

FORGED
 FROM

BAR STEEL

AND
 TEMPERED
 IN

OIL.

WE CHALLENGE COMPETITION FOR

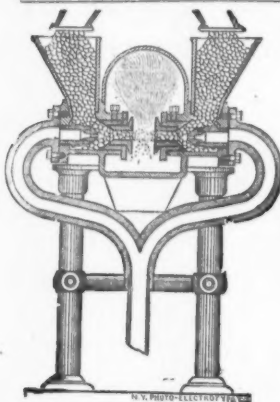
→ Cutting and Wearing Qualities. ←

THE FINEST. AS GOOD AS THE BEST.

We Expect to Lead, and you cannot afford to lose a chance of keeping posted on the IMPROVEMENTS of the range. Get our prices, and then try a sample order. Your customers will compel you to order again.

Address, with name of paper where you saw this,

The CLEVELAND MACHINE CO., 143 to 161 Leonard St., CLEVELAND, O.



Sectional View of Pulverizer.

PNEUMATIC PULVERIZER.

The principle of pulverization consists in the employment of

TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon Sulphurets and ores containing rusty Gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

10 to 200 Tons Per Day,

including a Sectional Steam Boiler supplying all the power required.

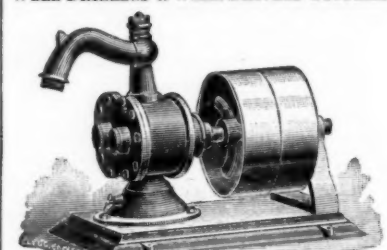
PNEUMATIC PULVERIZER COMPANY,

L. F. HOLMAN, Pres.

F. A. LUCKENBACH, Supt.

2 and 4 Stone Street, New York.

WRITE FOR PARTICULARS.



Power Rotary Force Pump.

Catalogue of Pumps for Farm and Domestic Use, Mines, Factories and Plantations sent on application.



FOR THE BEST
MACHINERY

—FOR—
**SHINGLES,
 HEADING and STAVES,**

And Improved
GAGE LATHES

For
 Turning Handles, Etc.

ADDRESS:

TREVOR & CO

LOCKPORT,

N. Y.

BUY "THE NEW SOUTH."

PRICE \$2.50.

HANDSOMELY BOUND IN CLOTH.

MANUFACTURERS RECORD CO., PUBLISHERS.

→ HARDWARE. ←

Baltimore WHOLESALE Prices.

ANVILS.	
Eagle and Vulcan.....	10 c. dis 30%
Wright's.....	9 1/4 c
Armitage's Mouse Hole.....	9 c
Trenton.....	10 c
Wilkinson's.....	10 c
AUGERS AND BITS.	
Conn. Valley Mfg. Co.....	extra, 60x10 1/2
Douglas Mfg. Co.....	No. 1, 60x10 1/2
Ives.....	
Cook's Douglas Mfg. Co.....	dis 55x10 1/2
Grissold.....	dis 50x10 1/2
Patent Solid Head.....	dis 25 1/2
Russell Jennings' Auger, Dowell, Machine-	
Dowell and Hand Rail Bits.....	dis 10x10 1/2
Ives' Jennings' Bits.....	dis 40x10 1/2
Expansive Bits, Clark's small, 2 1/2; large,	
2 1/2.....	dis 35 1/2
Expansive Bits, Ives.....	dis 45 1/2
Expansive Bits Blake's.....	2 1/2 and 3 1/2, dis 45 1/2
Hollow Augers, Ives.....	dis 25 1/2
Hollow Augers, Douglas.....	dis 25 1/2
Hol. Aug., Bonney's Adjust.....	dis 48 1/2
Hol. Aug., Stearns' Adjust.....	dis 20x10 1/2
Hol. Aug., Ives' Expansive, each 2 1/2, dis 25 1/2	
Hol. Aug., Universal Expansive, each 2 1/2, dis 20 1/2	
Wood's.....	dis 25 1/2
Gimlet Bits.....	dis 7 1/2 gross, dis 50 1/2
Gimlet Bits, Diamond.....	dis 1 1/2, dis 50 1/2
Double Cut Gimlet Bits, Shephardson's.....	dis 40 1/2
Double Cut Gimlet Bits, Douglas.....	dis 40 1/2
Double Cut Gimlet Bits, Ives.....	dis 30x10 1/2
Morse's Bit Stock Drill.....	dis 50 1/2
L'Hommedieu's Ship Augers.....	dis 15 1/2
AWL HAPPS.	
Sewing Brass Ferrule.....	dis 30 gross, dis 40x10 1/2
Patent Sewing, Short.....	dis 40x10 1/2
Patent Sewing, Long.....	dis 1 1/2 gross, dis 45x10 1/2
Patent Peg, Plain Top.....	dis 45x10 1/2
Patent Peg, Leather Top.....	dis 45x10 1/2
AWLS, BRAD SETS, &c.	
Awls, Sewing, Common.....	dis 35 1/2
Awls, Shouldered Peg.....	dis 45 1/2
Awls, Patent Peg.....	dis 35 1/2
Awls, Shouldered Brad.....	dis 45x10 1/2
Awls, Handled Brad.....	dis 45x10 1/2
Brad Sets, Aiken's.....	dis 45x10 1/2
Brad Sets, No. 42, 10x30, No. 43, 12x50, dis 70x10 1/2	
Brad Sets, Stanley's Exc., No. 1, 2, 4, 6, dis 30x10 1/2	
Brad Sets, Stanley's Exc., No. 2, 4, 6, dis 30x10 1/2	
Brad Sets, Stanley's Exc., No. 3, 4, 6, dis 30x10 1/2	
AXES.	
Collins & Co.....	dis 70; beveled, dis 75
Lippincott or Mann's.....	
Single Bit, 1/2 to 5/8 and under.....	dis 75 net
Single Bit, 1/2 to 6 and over.....	dis 75 net
Single Bit, beveled.....	dis 75 net
Double Bit, 1/2 to 5/8 and under.....	dis 120 net
Double Bit, 1/2 to 6 and over.....	dis 120 net
Double Bit, beveled.....	dis 120 net
Second quality Axes.....	75 cts less than above
AXLES.	
Sheldon & Co., iron.....	dis 55 off
Steel.....	dis 55 off
AXLE GREASE—FRASER'S.	
AXLE GREASE—FRASER'S.....	dis 50
BALANCES.	
Spring Balances.....	dis 50 1/2
BELLS.	
Hand, Light Brass.....	dis 75x10 1/2
Hand, White Metal.....	dis 70 1/2
Hand, Silver Chime.....	dis 25x10 1/2
Hand, Globe (Cone's Patent).....	dis 25x10 1/2
Gong, Abbe's.....	dis 25x10 1/2
Gong, Yankee.....	dis 40 1/2
Gong, Barton's.....	dis 40x10 1/2
Leon Reading.....	dis 45x10 1/2
Pull, Brook's.....	dis 50x10 1/2
Crank, Taylor's.....	dis 25x10 1/2
Lever, Sargent's.....	dis 55x10 1/2
Bloomfield.....	dis 20 1/2
Lever, R. & E. M. Co's.....	dis 45x10 1/2
Call.....	dis 40 1/2
Cow, Common Wrought.....	dis 55x10 1/2
Cow, Western, Sargent's List.....	dis 70x10 1/2
Cow, Kentucky, Sargent's List.....	dis 70x10 1/2
Cow, Moore's or Dodge's, Genuine Ky., new list:	
Nos. 0, 1 1/2, 2 1/2, 3 1/2, 5, 6 Hog.....	dis 70x10 1/2
dis 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100	
Cow, Texas "Star".....	dis 50x10 1/2
BELLERS.	
Blacksmith's Common.....	dis 50x10 1/2
Molder's.....	dis 50 1/2
Hand Bellows.....	dis 50 1/2
BLIND FASTENERS.	
Francis.....	dis 20 1/2
Mackrell's.....	dis 20 1/2
Van Sand's Screw Pattern, 1 1/2 gross, net.....	dis 60 1/2
Van Sand's Old Pattern.....	dis 55 1/2
Merriman's.....	new list, net
Zimmerman's, 20 1/2 in.....	dis 33 1/2
Zimmerman's, 9 in.....	dis 33 1/2
BLIND STAPLES.	
Barbed, 1/4 in. and larger.....	dis 90 net
Barbed, 1/4 in.....	dis 100 net
BLOCKS.	
Penfield Blocks.....	dis 60x10 1/2
Bagnall & Loud.....	dis 60x10 1/2
BOLTS.	
Cast Iron Barrel Shutter, &c.....	dis 70 1/2
Cast Iron Chain (Sargent's list).....	dis 65x10 1/2
Wrought Barrel.....	dis 70 1/2
Wrought Square.....	dis 70 1/2
Wrt. Shutter, all Iron, Stanley's list.....	dis 60x10 1/2
Wrt. Shutter, Brass Knob, Stanley's list.....	dis 40x10 1/2
Wrought Shutter, Sargent's list.....	dis 60x10 1/2
Wrought Sunk Flush, Sargent's.....	dis 55x10 1/2
Wrought Sunk Flush, Stanley's.....	dis 40x10 1/2
Wrought B. K. Flush, Stanley's.....	dis 50x10 1/2
Carriage and Tire, Common, new list.....	dis 70x10 1/2
Carriage Bolts, Philadelphia Pattern, dis 75x10 1/2	
Carriage Bolts, Clarke's.....	dis 70x10 1/2
Norway.....	dis 70x10 1/2
R. B. & W. Carriage (old list).....	dis 70 1/2
Tire, American Screw Co's, Phila.....	dis 8 1/2
Tire, "Bay State".....	dis 8 1/2
Eagle Philadelphia Tire Bolt.....	dis 80 1/2
Stove.....	dis 67 1/2
Plow.....	dis 60 1/2
Machine.....	dis 70x10 1/2
Bolt Ends and Lag Screws.....	dis 70x10 1/2
BOLAX.	
90 1/2 in. net.....	
BRACES.	
Q. S. Backus.....	dis 40 1/2
Barber's.....	dis 50 1/2
Spofford's Patent.....	dis 50x10 1/2
Ives' Patent Braces.....	dis 50 1/2
Common Ball (American).....	dis 45 c. net
Amidon's.....	dis 40 1/2
BORING MACHINES—WITHOUT AUGERS.	
Sweet & Clark upright, 2 1/2 angular.....	dis 30 net
Lawrence.....	dis 30 net
Hubbard.....	dis 30 net

Phillips, with Augers.....	7.00	7.50.....net
BRACKETS.		
Shelf, plain.....	dis 50x10 1/2	
Shelf, fancy.....	dis 55x10 1/2	
BRIGHT WIRE GOODS.		
New list.....	dis 75x10 1/2	
BULL RINGS.		
Union Nut Co.....	dis 55 1/2	
Sargent's.....	dis 60x10 1/2	
Humason, Beckley & Co's.....	dis 70 1/2	
BUTTS.		
Wrought Brass.....	dis 80 1/2	
Cast Brass, Fast Joint.....	dis 35 1/2x10 1/2	
Cast Brass, Loose Joint.....	dis 35 1/2x16 1/2	
Fast Joint, Narrow.....	dis 60x10 1/2	
Fast Joint, Broad.....	dis 60x10 1/2	
Loose Joint.....	dis 70x10 1/2	
Loose Joint, Jap, with Acorns.....	dis 70x10 1/2	
Parliament Butts.....	dis 70x10 1/2	
Mayer's Hinges.....	dis 70x10 1/2	
Loose Pin, no Acorn.....	dis 70x10 1/2	
Loose Pin, Acorn.....	dis 70x10 1/2	
Loose Pin, Acorn, Japanned.....	dis 70x10 1/2	
Loose Pin, Acorn, Jap'd, Plated.....	dis 70 1/2	
Tips.....	dis 70 1/2	
Wrought Iron.		
Fast Joint, Narrow.....	dis 70 1/2	
Fast Joint, Lt. Narrow.....	dis 70 1/2	
Fast Joint, Broad.....	dis 70 1/2	
Loose Joint, Broad.....	dis 70 1/2	
Table Butts, Back Flaps, &c.....	dis 70 1/2	
Inside Blind, Regular.....	dis 70 1/2	
Inside Blind, Light.....	dis 70 1/2	
Loose Pin, Wrt.....	dis 70x10 1/2	
Loose Pin, Light.....	dis 70x10 1/2	
Spring Hinges—		
Coe's Spring and Blank Butts.....	dis 30 1/2	
Hart Manufacturing Co.....	dis 60x10 1/2	
American Spring Hinge Co's.....	dis 25 1/2	
Gem Spring Hinges.....	dis 25 1/2	
Blind Butts, Shephard's, Nos. 50 and 60.....	dis 70 1/2	
Blind Butts, Shephard's, No. 050.....	dis 70x10 1/2	
Blind Butts, Shephard's No. 75.....	dis 70x10 1/2	
Blind Butts, Lull & Porter.....	dis 75x10 1/2	
Blind Butts, Huffer.....	dis 50x10 1/2	
Blind Butts, Standard.....	dis 75x10 1/2	
Standard Lull & Porter.....	dis 75x10 1/2	
BOW PINS.		
Humason, Beckley & Co's.....	dis 55x10 1/2	
Sargent & Co's.....	dis 59.70 and 21.40; dis 60x10 1/2	
Hotchkiss.....	dis 25 1/2	
BUTCHER'S CLEAVERS.		
Humason & Beckley Mfg. Co.....	dis 30x10 1/2	
Bradley's.....	dis 25 1/2	
Beatty's.....	dis 40 1/2	
1 1/2 2 1/2 3 1/2 4 1/2 5 1/2 6 1/2 7 1/2 8 1/2		
16.50 19.00 21.50 24.00 27.00 30.00 33.50 36.50		
CAN OPENERS.		
American.....	dis 30 gross	dis 30 gross
New Idea.....	dis 15 gross	dis 15 gross
No. 4, French.....	dis 20.25, dis 55 1/2	
No. 5, Iron Handle.....	dis 20.25, dis 55 1/2	
Sardine Scissors.....	dis 27.00, dis 55 1/2	
Sprague, No. 1, 2; No. 2, 2.25; No. 3, 2.50; dis 50x10 1/2		
Universal.....	dis 23.00, dis 33 1/2	
CAPS, PERCUSSION, \$1.00.		
U. M. C., F. C. trimmed.....	dis 50c	
U. M. C., F. L. ground.....	dis 50c	
U. M. C., Cen. fire ground.....	dis 70c	
U. M. C., Double W. Proof.....	dis 70c	
G. D. & S. B.....	dis 33c	dis 10 1/2
E. B. & W. B.....	dis 33c	dis 10 1/2
Musket, in 1-10's.....	dis 33c	
Hicks Ground Edge in Brass Boxes.....	dis 33c	
CARTRIDGES.		
Rim.....	dis 60x10 1/2	
Central Fire, pistol size.....	dis 40x10 1/2	
" " Military.....	dis 30x10 1/2	
B. B. Caps, Round Ball.....	dis 1.60	
" Swaged Conical.....	dis 1.75	
NEW LIST ON CARTRIDGES.		
Rim-fire, 22 short.....	dis 5 1/2 long.....	dis 6.00
" 32 ".....	dis 10 ".....	dis 15.50
" 38 ".....	dis 18 ".....	dis 18.00
" 41 ".....	dis 15 ".....	dis 17.50
Central Fire—32, 38, 41, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100		
CARDS.		
Horse and Curry.....	dis 10 1/2	
Cotton, new list, Aug, 1883.....	dis 10 1/2	
Wool, new list, Aug, 1883.....	dis 10 1/2	
CARPET STRETCHERS.		
Cast Steel, Polished.....	dis 25.00, dis 30 1/2	
Cast Iron, Steel Points.....	dis 25.00, dis 30 1/2	
Bullard's.....	dis 25 1/2	
CASTERS.		
Bed.....	dis 55 1/2	
Plate and Shallow Socket.....	dis 55 1/2	
Deep Socket.....	dis 40 1/2	
Martin's Patent (Phoenix).....	dis 45 1/2	
CATTLE LEADERS.		
Humason, Beckley & Co's.....	dis 75 1/2	
Sargent's.....	dis 70 1/2	
P. S. & W.....	dis 50 1/2	
CHAIN.		
German Halter and coil Chain.....	dis 60 1/2	
Trace, Breast and Fancy.....	dis 50x10 1/2	
Oneida Halter Chain (old list).....	dis 45 1/2	
Galvanized Pump Chain.....	dis 60 1/2	
Jack Chain, Iron.....	dis 75x10 1/2	
Jack Chain, Brass.....	dis 75 1/2	
CHALK.		
White.....	dis 55c net	
Red.....	dis 75c net	
Blue.....	dis 90c net	
White Cravens.....	dis 13c net	
COTTON LINES.		
Cotton Fish Lines.....	dis 40 1/2	
Cotton Chalk Lines, 20 feet:		
Nos. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100		
CHISELS.		
Socket Framing, Crossmans.....	dis 65x10 1/2	
Socket Framing, Crossmans.....	dis 65x10 1/2	
Socket Framing & Firmer.....	No. 1. Extra.	
Socket, Douglas.....	dis 75x10 1/2	
Socket, Ohio Tool Co.....	dis 75x10 1/2	
Socket, Peck, Stone & Wilcox.....	dis 75x10 1/2	
Socket, Corner.....	dis 75x10 1/2	
Tanged Firmers, Douglas.....	dis 40x10 1/2	
Tanged Firmers, Butcher's.....	dis 55.00 to 1.00	
I. Merrill's Socket and Framing Chisel.....	dis 65x10 1/2	
CLAMPS.		
Iron, Screw, Eagle.....	dis 50 1/2	
Iron, Adjustable, Stearns.....	dis 20x10 1/2	
Iron, Cabinet, Sargent's.....	dis 65x10 1/2	
Iron, Carriage maker's, Carr & Crawley.....	dis 25 1/2	
CLIPS, AXLE.		
Norway or Best.....	dis 60x10 1/2	
Superior.....	dis 45x10 1/2	
Conestogo.....	dis 60x10 1/2	
Coal Hods—Griffiths.....	dis 40 1/2	
COCKS, BRASS.		
Racking, new list.....	dis 55x10 1/2	
Globe, new list.....	dis 55x10 1/2	
Plain Bibbs.....	dis 55x10 1/2	
Ale and Beer, new list.....	dis 55x10 1/2	

J. STEVENS' Arms & Tool Co.

P. O. BOX 860.

Chicopee Falls, Mass.

MANUFACTURERS OF

Spring Calipers

DIVIDERS.

FINE

MACHINISTS' TOOLS and FIREARMS.

—OUR—

Shooting Gallery Rifle

Is the Favorite Everywhere.

Send for ILLUSTRATED CATALOGUE.



Stoddard's Caliper and Divider.

CRONK



MANUFACTURERS OF THE

CRONK'S PATENT

WIRE CUTTER,

Bender and Plier and Hog Ringer Combined.

Specially adapted for use on Wire Fences; also best in the world for TINNERS' use. Patent Allowed.

CAREW'S PATENT WIRE CUTTER.



These goods have recently been greatly improved. They are now made throughout of

FORGED STEEL.

The advantage of this cutter is seen at a glance. The adjustable jaws are its main feature. These are made of the best tool steel, and are brought to a keen cutting edge before being tempered. The cutting quality is unsurpassed. Whenever they become dulled by use, they can easily be removed, by driving from the end showing price-mark, ground, and as easily replaced. This may be repeated as often as expedient; or they can be replaced by duplicate jaws, thus obviating the necessity of purchasing new cutters. Five sizes 6

Cincinnati Iron Market Report.

Specially reported by ROGERS, BROWN & Co., Pig Iron Commission.

CINCINNATI, April 11, 1887.

The condition of the market continues anomalous. Buyers are calling for only what is needed for immediate use, and seem fully persuaded that they will profit by waiting. This feeling is carried so far that we hear of instances where consumers, having used up their own stock, are borrowing from neighbors in order to further delay purchases. On the other hand most makers and dealers consider the market essentially a strong one. They argue that stocks are the lightest ever known, that producing capacity cannot be further materially increased this year, that all indications point to still greater consumption, and that the cost of making has been very materially advanced. In some cases the increase in cost, added to the late advance in freights, has fully absorbed the entire advance since last fall. The freight situation is thoroughly unsettled and demoralized. The new law is working out surprising inequalities and discriminations, but the tendency of all is towards considerable advances in rates. It is estimated that the advances on freight, so far as yet announced, will average 20 per cent. We quote cash f. o. b. Cincinnati:

HOT-BLAST FOUNDRY.

Ohio and Southern Strong Coke No. 1.	\$21 50@22 00
" " " " No. 2.	21 00@21 50
" " " " No. 3.	20 00@20 50
Ohio Soft Stonecoal, " No. 1.	21 00@22 00
Ohio Soft Stonecoal, " No. 2.	20 00@21 00
Mahoning and Shenango Valley Coke, No. 1.	23 00@24 00
Hanging Rock Charcoal No. 1.	24 00@26 00
" " " " No. 2.	23 00@24 50
Tennessee & Alabama Charcoal No. 1.	22 00@23 00
" " " " No. 2.	21 00@22 00

FORGE.

Strong Neutral Coke.	\$19 50@20 00
Mottled " "	18 50@19 00
Cold Shortings.	18 50@19 00

CAR WHEEL AND MALLEABLE.

Southern Car-Wheel Iron.	26 00@28 00
Hanging Rock Cold Blast, No. 1.	27 00@28 00
Hanging Rock Cold Blast, No. 2.	24 00@25 00
Lake Superior Malleable.	27 00@28 00

Specially reported by E. L. HARPER & Co.

CINCINNATI, April 11, 1887.

Market quiet, but a little firmer. Indications point to a good trade as soon as the railroads are prepared to name rates. We quote for cash on wharf or cars here:

FOUNDRY.

Hanging Rock Charcoal, No. 1.	\$23 50@24 00
" " " " No. 2.	22 50@23 50
Southern Charcoal, " " "	24 50@25 50
" " " " No. 2.	23 50@24 50
Strong Neutral Coke, " " "	22 50@23 50
" " " " No. 2.	21 50@22 50
American Scotch, " " "	20 00@21 00

GREY FORGE.

Virginia Neutral Coke.	19 50@20 50
Cold Short.	19 00@19 50

CAR WHEEL AND MALLEABLE.

Hanging Rock, strictly cold blast.	27 00@28 00
Hanging Rock, strictly warm blast.	23 00@26 00
"Cranberry," N. Carolina warm blast.	26 00@27 00
Amherst and Virginia warm blast.	25 00@26 00
Lake Superior Charcoal, all grades.	26 00@27 00

Chicago Iron Market.

Specially reported by ROGERS, BROWN & Co. W. W. BACKMAN, Resident Agent.

CHICAGO, April 11, 1887.

Those who expected a complete muddle in shipping business when the interstate commerce law went into effect have not been disappointed. Matters that were unsettled in anticipation of the law are hopelessly mixed now that the law is in operation. The new rates so far as they have been promulgated are considerably higher than the old rates, both for long and short distances. From the leading Ohio districts they have advanced 50 to 60 cents per ton. From the South all-through shipments on through bills lading have ceased. The new rate from Cincinnati is \$2 per ton. The old rate from Birmingham was based on a difference of \$1.25 per ton between Cincinnati and Chicago. Until some pro-rating arrangement is restored, Southern rates are therefore advanced 75 cents. Rates on ore and fuel used by the furnaces North and South are also advanced, so that the makers of iron claim that it is impossible to stand these advances themselves, and that the buyers must pay higher prices correspondingly. One furnace tributary to this market finds its

iron costing \$2 56 per ton more than at the corresponding time last year. In spite of all this, buyers think a further decline in prices is coming, and hold back orders. The situation is therefore mixed and uncertain. We quote for cash f. o. b. cars Chicago:

COKE AND STONE COAL FOUNDRY.

Ohio (Hanging Rock) Softeners No. 1.	23 50@24 50
" " " " " " " "	23 50@24 00
" " " " " " " "	22 50@23 00
" " " " " " " "	21 50@22 00
Southern Coke, No. 2.	23 00@24 50
" " " " " " " "	21 50@22 00
" " " " " " " "	21 00@21 50

CHARCOAL FOUNDRY.

Lake Superior.	\$23 00@24 00
Southern.	23 00@24 00
Hanging Rock.	24 00@25 50

CAR WHEEL AND MALLEABLE.

Lake Superior.	23 00@24 00
Standard Southern.	25 00@27 50
Hanging Rock, cold blast.	27 50@29 50
" " " " " " " "	25 00@26 00

OLD MATERIALS.

Old Rail, American.	26 50@27 50
Old Wheels.	22 00@23 00

St. Louis Iron Market.

Specially reported by ROGERS, BROWN & Co., Gay Building, 204 N. 3rd street, St. Louis. W. H. SHIELDS, Manager.

ST. LOUIS, April 11, 1887.

An attempt to describe the iron market would be like the celebrated chapter on Snakes in Ireland; there is no iron market. Some little business is done in shifting round among local consumers and filling in with a few car-loads on overdue orders, but existing conditions prevent transaction of much new business. The railroads are putting out some freight rates, but there seems to be so much uncertainty about them and they show such heavy advances for the most part, that business is practically impossible. Shipments on old orders have, in many cases, been cut off by stoppage of pro-rating arrangements between railroads, and much confusion and grumbling are the result. The tendency of the law so far is to enhance the cost of iron at the furnaces, and largely increase the cost of delivering it. The stove moulders in union shops are still out and some of the open shops have shut down. The general impression seems to be that the union moulders will be compelled to give in, in view of the fact that the stove trade is exceedingly dull and all manufacturers report large stocks on hand. We quote for cash f. o. b. St. Louis:

HOT-BLAST CHARCOAL.

Missouri.	\$22 00@22 50
Southern.	22 00@24 00

COKE AND COAL.

Southern No. 1.	22 00@23 50
Southern No. 2.	21 50@22 00
Ohio Softeners.	22 00@25 00

MILL IRONS.

Missouri.	21 00@21 50
Southern No. 1.	20 00@21 00
Southern No. 2.	19 50@20 00

CAR-WHEEL AND MALLEABLE IRON.

Southern.	25 00@28 00
Lake Superior.	25 00@27 00

MISCELLANEOUS.

Old Wheels.	21 00@22 00
Old Rails.	27 00@28 00
Connellsville Coke, (Frick's).	— @ 6 15

Chattanooga Iron Market.

Specially reported by LOWE & TUCKER, Brokers and Commission.

CHATTANOOGA, TENN., April 11, 1887.

The most prominent subject of the week has been the partial paralysis of business, caused by the interstate commerce bill. Scarcely any two railroad officials or business men can be found who agree upon its different complexion. There has been no occurrence in many years that has caused such a demoralization of business as this, and its effects are serious and, unless the obstructions are obviated, the result will be as bad as any panic that ever occurred in the United States. Buyers will not buy, and sellers will not sell, only at the works, and confidence in the future is rapidly declining, which the prompt action of the commissioners will alone arrest. All quotations at the present time would be out of order, as the future is uncertain.

A TIN or metal roof painted with two coats of Dixon's Silica Graphite Paint, and a third coat the following season, will not need painting again for 10 years or longer. Send for circulars and testimonials, and a sample piece of tin roof that was painted 13 years ago. Address Jos. Dixon Crucible Co., Jersey City, N. J.

THE SARGENT MFG. Co.**Specialties.**

NECESSITY, COMFORT, LUXURY.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.

1. **Sargent's Monarch, Empress and Premier Reclining Chairs.** These Chairs are the best of their class made in the world, having an almost endless variety of positions, made of the best material, and are upholstered to insure perfect rest. They range in price from \$35.00 to \$150.00. We also make a large variety of other styles, including our Favorite, Automatic Nos. 65, 65 and 103, which range in price from \$10.00 to \$60.00.

2. **Sargent's Invalid Rolling Chairs.** We represent but two of our numerous styles, which include all kinds, for house or street use, reclining and rigid, cane and upholstered.

3. **Sargent's Solid Comfort Back-Rest and Folding Bed Tray.** Treasures for invalids. Prices of Back-Rest: No. 1, plain, \$4; No. 2, with arms, \$5; No. 3, with arms and head-rest, \$6. Prices of Trays: No. 1, 15x25 inches, \$3; No. 2, 17x28 inches, \$4.

4. **Earth Closets.** Its merits are incontestably established by 16 years' trial. As a sanitary measure as well as a convenience, it should be adopted in every country house.

5. **Sargent's Sanitary Arm Commodes** are absolutely orderless. They have a double seat; broad arms that adjust independently; a metallic enameled pail with flexible rubber and metallic covers.

NOTE.—We make a specialty of Invalids' Appliances, and aim to supply every known device for the alleviation of suffering. Send for our 80-page Illustrated Catalogue.

SARGENT MFG. CO.

814 and 816 Broadway, NEW YORK

STEAM PUMPS

FOR EVERY DUTY.

BEST MATERIALS ONLY USED.

FULLY GUARANTEED AND TESTED.

It will pay you to write for prices.

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CLEVELAND,

OHIO.

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The Hercules is me-
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Price \$2.50. Handsomely Bound in Cloth.

MANUFACTURERS' RECORD Co., Publishers.

The VICTOR TURBINE

Possesses more than Double the Capacity of other Water Wheels of same diameter, and has produced the Best Results on Record, as shown in the Following Tests at Holyoke Testing Flume:

Size of Wheel.	Head in Ft.	Horse Power.	Per Ct. Useful Effect.
15-inch.	18.00	30.17	.8932
17 1/2-inch.	17.96	36.35	.8990
20-inch.	18.21	49.00	.8532
25-inch.	17.90	68.62	.9584
30-inch.	11.85	52.54	.8676

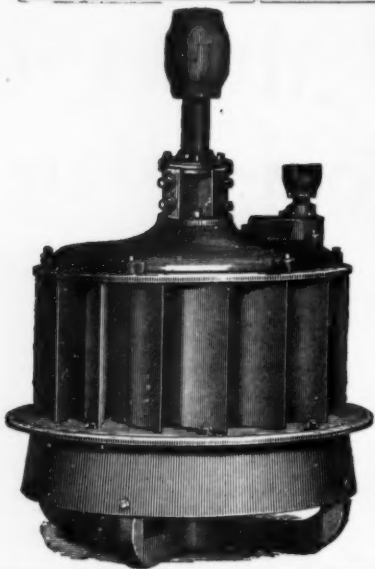
WITH PROPORTIONATELY HIGH EFFICIENCY AT PART-GATE.

Such results, together with its nicely-working gate, and simple, strong and durable construction, should favorably recommend it to the attention of ALL discriminating purchasers. These wheels are of very Superior Workmanship and Finish, and of the Best Material. We also continue to manufacture and sell at very low prices the

ECLIPSE DOUBLE TURBINE.

So long and favorably known. State your requirements, and send for Catalogue to the

STILWELL & BIERCE MFG. COMPANY
DAYTON, OHIO, U. S. A.



SILVER PLATED WARE.

Wm. Rogers Manf. Co.dis 50&10
Holmes, Booth & Hayden.....dis 50&10
Wallace's Steel Silver Plated.....dis 33 1/2 & 10
Rogers Bros 1847.....dis 50&5
C. Rogers & Bro.dis 50&10

SCREWS.

Standard new list, Feb. 15.

Flat Head Bright.....75
Round Head Bright.....70
Flat Head Brass.....70
Round Head Brass.....65
Flat Head Blue (add 5¢ to net).....75
Continental Flat Head.....80
Brass and Silver Capped.....40
Japanned Flat Head.....70
Coach, Patent Gimlet Point.....dis 66 1/2
Coach, Common or Lag.....dis 70
Bed.....dis 25
Machine, Flat Head, Iron.....dis 35
Machine, Round Head, Iron.....dis 30
Bench, Iron.....dis 58
Bench, Wood, Beach.....dis 25
Bench, Wood, Hickory.....dis 20
Hand, Wood.....dis 25
Hand Rail, Sargent's.....dis 40
Hand Rail, Humason, Beckley & Co.'s.....dis 40
Hand Rail, Am. Screw Co., list Jan. 1, '81.....dis 70
Jack (Wilson's).....dis 25

SCREEN FRAMES AND FIXTURES.

Standard Window Screens No. 1, per doz \$4.25
Door " No. 5, per doz \$5.00
" Window Corner Irons, No. 3, per doz \$1.50
Door " No. 6, " " \$1.50
" Door Latches, per dozen, \$3.60
Porter's Patent Window and Door Screen Frames:

PER DOZ. SETS.

In. Im. Blk
White. Walnut.
No. 20.....\$2.75 \$3.25
No. 21.....2.25 4.00
No. 22.....5.50 6.75
No. 23.....6.00 7.50
No. 24.....9.00 11.00

Porter's Corners—
No. 1. Corners and Sticks complete for a three-foot window, per doz sets \$4.00
No. 1. Set for Window, per doz sets \$4.00
No. 1 1/2. " " per doz sets \$5.00
No. 2. " " per doz sets \$5.00
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Boughton's Adjus. Window and Door Screens.....dis 25
Boughton's Adjus. Window and Door Frames.....dis 20
Window screen frames (Stuart's).....dis 25

SHEARS AND SCISSORS.

American (Cast) Iron.....dis 70&10
Pruning.....see Pruning Hooks and Shears
Barnard's Lamp Trimmers.....per doz \$4.00
Tinners.....dis 20
Massachusetts.....dis 80&10
Seymour's.....dis 60&10
Jersey Shears.....dis 80
J. Wiss & Son, Nickel, 50&5; Japanned, 60&10

SHEAVES.

Sliding Door, M. W. & Co., List.....dis 45&10
Sliding Door, R. & E. list.....dis 60&10
Sliding Door, Patent Roller.....dis 60&10
Sliding Door, Pt. Roller, Hatfield's.....dis 60&10
Sliding Door, Russell's Anti-Friction.....dis 60&10
Also see Hangers.

SHOVELS AND SPADES.

Ames, New List, November 1, 1885.....dis 20
Griffiths.....dis 50&5
Remington's (Lowman's Patent).....dis 30
Rowland's.....dis 60
Lippincott, new list.....dis 25
Hussey, Bins & Co.....dis 25

SILVER PLATED HOLLOW WARE.

Wm. Rogers Manf. Co.....dis 50
Meriden Britannia Co.....dis 40

SOLDERING IRONS AND COPPERS.

Covert's Soldering Irons.....dis 35
Covert's Adjustable Coppers.....dis 35

SPOONS.

Britannia.....dis 60, 10&10
Tinned, Iron, Table and Tea.....dis 65
Tinned Iron Basting.....dis 30
German Silver.....dis 40&5

STONE.

Hindustan No. 1, 4c; Axe, 5c.....net
Sand Stone.....No. 1, 6c, dis 33 1/2 & 10
Washita Stone.....No. 1, 2c, net.
Washita Stone, Slips.....No. 1, 4c, net.
Arkansas.....\$1.50 per lb., net

SQUARES.

Steel.....dis 60&10; full cases, dis 70&10
Iron.....dis 60&10; full cases, dis 70&10
Nickel Plated.....add \$1.50 per doz net.
Try Square and T Bevels.....dis 50&10
Diaper's Try Square and T Bevels.....dis 40

TACKS, BRADS, AC.

American Iron Carpet Tacks, all kinds.....70
Steel Carpet Tacks, all kinds.....70
Swedes Iron Carpet Tacks, all kinds.....70
Swedes Iron Upholsterers' Tacks.....67 1/2
Tinned Swedes Iron Tacks.....67 1/2
Tinned Swedes Iron Upholsterers' Tacks.....67 1/2
American Iron Cut Tacks.....67 1/2
Gimp and Lace Tacks.....67 1/2
Tinned Gimp and Lace Tacks.....67 1/2
Copper Tacks.....30
Copper Finishing and Trunk Nails.....30
Cigar Box Nails.....45
Finishing Nails.....60
Trunk and Clout Nails.....60
Tinned Trunk and Clout Nails.....60
Basket Nails.....60
Chair Nails.....60
Zinc tacks.....60
Common and Patent Brads.....60
Hungarian Nails and Miners' Tacks.....60
Tinned Capped Trunk Nails.....50
Looking Glass Tacks.....40
Picture Frame Points.....40
Leathered Carpet Tacks.....40
Brush Tacks.....40

TAP BORERS.

Common and Ring.....dis 20
Ives' Tap Borers.....dis 15
Enterprise Mfg. Co.....dis 25

TOBACCO CUTTERS.

Enterprise Mfg. Co (Champion).....dis 20&10
Wood Bottom.....per doz \$5.50
All Iron.....per doz \$9.50, dis 40&5
Wilson's.....dis 50

THERMOMETERS.

Tin Case.....dis 75&10
Therm. Glasses.....\$1.25 per doz.

TON CALKS.

Winsted.....per pc. dis 5

TRAPS.

Game, Newhouse.....dis 35
Game, Oneida Pattern.....dis 60&10
Game, Blake's Patent.....dis 40&10
Mouse, Wood, Choker.....per doz holes, 16c
Mouse, Round Wire.....per doz \$1.50, dis 10
Mouse Cage, Wire.....per doz \$2.50, dis 10
Mouse, Catch-em-alive.....per doz \$2.50, dis 10
Cyclon Mouse.....per doz 60 cts.
Ideal Mouse.....per doz \$1.00
Boss.....per doz \$1.00
Rat, "Decoy".....per doz \$1.00, dis 10
Delusion Mouse, per doz.....\$1.50
Ideal.....per doz \$1.50 gross

TROWELS.

Lothrop's Brick and Plastering.....dis 30
Reed's Brick and Plastering.....dis 15
Dixon's Brick and Plastering.....dis 20&10
Clement & Maynard's.....dis 20
Worral's Brick.....dis 20
Bradley & Walby's.....dis 20
Garden.....dis 55
Rose's Brick.....dis 15

TRUCKS (WAREHOUSE, AC.)

Handy Truck.....\$2.50 net
Penfield Block Co's list, 1884.....dis 35
Peerless, with Cogs, No. 3.....\$400
Peerless, with Cogs, No. 4.....\$600
Eureka, No. 2.....per doz 42 00

VISES.

Cheney's Combined Vise and Anvil.....dis 30
Solid Box—Wilson's.....dis 50&10
" Trenton.....dis 40&5
" Iron City Tool Works.....dis 50&10
Manner Drill Mfg. Co's—
Machinist's Vise.....\$35.00 doz. dis. 50
Bench—Wilson's.....dis 45
" Trenton.....dis 25
" Parker's.....dis 20
" Prentiss.....dis 25
" Bonney's.....dis 35
Well Wheels.....dis 60&10
Stephen's Patent Vises.....dis 30

WIRE.

Brass and Copper, list of Jan. 17, 1884.....dis 25
Bright and Annealed.....Nos. 16&18, dis 60&10
Bright and Annealed.....Nos. 16&18, dis 65
Bright and Annealed.....Nos. 27&36, dis 65
Coppered.....Nos. 16&18, dis 65
Galvanized, Nos. 16 to 18.....dis 40
Tinned, Nos. 16 to 18.....dis 60
Tinned Broom Wire, Nos. 18 to 25.....dis 60
Annealed Fence, Nos. 8&9.....dis 65
Annealed Grape, Nos. 10 to 14.....dis 65
Fence Staples, Galvanized.....per lb 5c
Japanned Barb Fence.....per lb 4c
Galvanized Barb Fence.....per lb 5c
Buck Thorn Galvanized.....per lb 5c
Picture Wire.....dis 60
Clothes Line Wire, Galvanized.....\$2.75 per doz
Wire Cloth, gree, drab and black.....per sq ft net

WIRE NAILS.

Standard Penny Nails.....\$3.75 Base.
Wire Nails List, April 13, 1886.....dis 30&5

WRENCHES.

American Adjustable.....dis 45
Baxter's Adjustable "S," list Jan. 1880.....dis 35
Baxter's Diagonal.....dis 40
Coes' Genuine.....dis 60
Coes' "Mechanics".....dis 60&10
Coes' Pattern, Malleable.....dis 50&10
Coes' Pattern, Wrought.....dis 80&10
Girard Standard.....dis 70&10
Girard Agt.....dis 80&10
Always Ready.....\$2.00—25
Collins' Wrenches.....dis 50, 10&5

WRINGERS.

Universal, XX, No. 2 1/2.....per doz. 30.00
Universal, XX, No. 2.....30.00
Universal, XX, No. 1 1/2.....48.00
Universal, XX, No. 1.....63.00
Universal, XX, No. 8.....each 10.75
Universal, XX, No. 12.....each 20.25
Universal, XX, No. 18.....each 22.75
Universal, XX, No. 24.....each 30.25
Peerless, no Cogs, No. 1.....42.00
Peerless, with Cogs, No. 2 1/2.....45.00
Peerless, with Cogs, No. 2.....48.00

MISCELLANEOUS.

"Diamond" Vegetable Grater.....\$5.00 per doz., 10
Rotary Knife Potato Parer.....\$18.00 per doz., net
Metallic Shingles.....\$5.50 and \$6.50 per square.
Hopper Cherry Seeders.....\$2.75 per doz, net

NEW SCOTT MANFG. CO'S

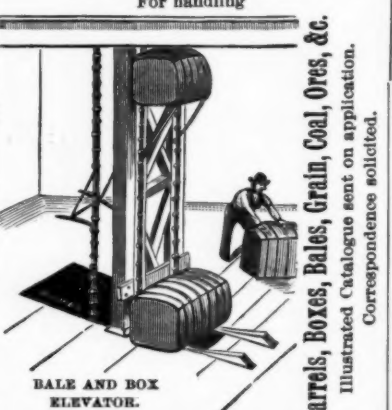
Rotary Peach Parer.....\$15.00 per doz., net.
Gold Medal Apple Parer.....5.00
Oriole Apple Parer, Corer & Slicer.....5.00
Victor.....15.00
Improved Hopper Cherry Seeders.....2.75

Roller Chain Belting Co., Columbus, O.

MANUFACTURERS OF
ELEVATORS, CONVEYERS

DRIVING BELTS

For handling



BALE AND BOX
ELEVATOR.

\$250 SINGLE. \$350 DOUBLE.

With Saws and Tools.
Top Saw Frame can be added to Single Mill when desired. Capacity, 3,000 to 5,000 per day with 3 men. 10 to 15 horse portable engine will drive it. Agents wanted. Send for description and terms.

ROCKWOOD, NEWCOMB & CO.
180 to 190 S. Pennsylvania St., Indianapolis, Ind.

The Centennial Water Cut-Off,
FOR CISTERNS.

It is the only Cut-Off that can be used in any position without extra pipe. Try them and you will use no other. For sale by the trade. Ask your jobber for them.

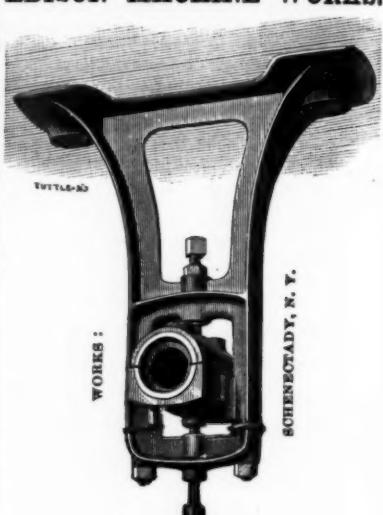
W. P. MYER
MANUFACTURER,
25 and 27 E. South St.,
INDIANAPOLIS, IND.

8-inch sample, by mail 50 cts. in stamps.

The following houses are special agents, who will furnish this Cut-off at manufacturers' prices: G. H. MOSEMAN & CO., New York City; F. H. LAWSON & CO., Cincinnati, Ohio; HASLET, FLANAGAN & CO., Philadelphia, Pa.; L. F. HOFFMAN, San Antonio, Tex.; TROY STAMPING WORKS, Troy, N. Y.

SHAFTING DEPARTMENT

EDISON MACHINE WORKS.



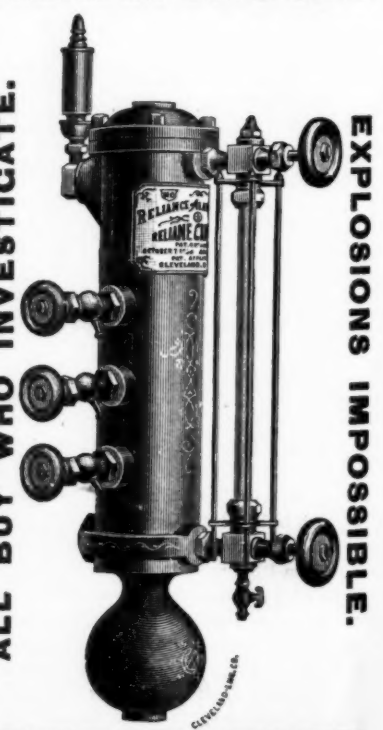
SALESROOM:

19 DEY STREET, N. Y.
Shafting, Pulleys, Hangers,
Couplings, &c.

Write for Illustrated Price List with Discount.

Machine Molded Pulley Castings
for Sale Low.

RELIANCE
ALARM GAUGES



AGENTS WANTED EVERYWHERE.

Illustrated Price-List Free.

RELIANCE GAUGE COMPANY,
Office, Argyle Building, CLEVELAND, OHIO.

ALL BUY WHO INVESTIGATE.

EXPLOSIONS IMPOSSIBLE.

NATIONAL WIRE & IRON CO.

DETROIT, MICH.,

Manufacturers
of
WIRE CLOTH

Galvanized,
Iron and Steel,
Brass & Copper.

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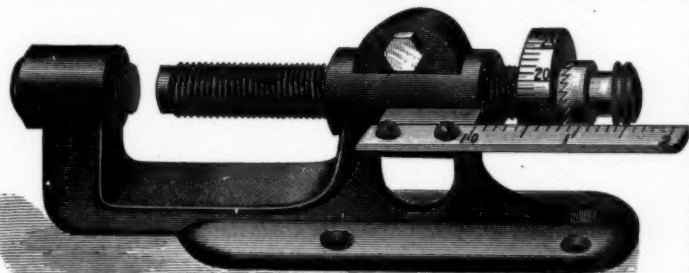
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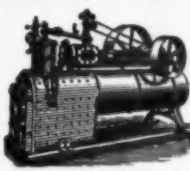
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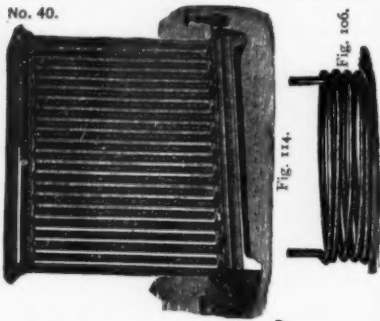


Fig. 114.

Fig. 106.

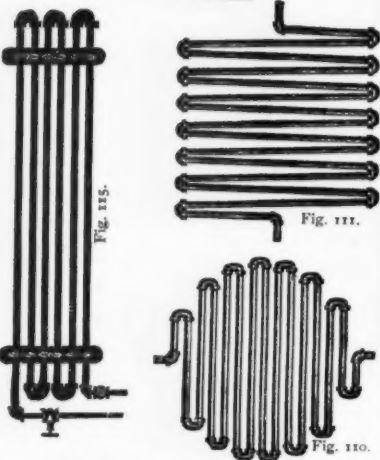


Fig. 115.

Fig. 111.

Fig. 110.



Fig. 118.



Fig. 107.

Fig. 105.

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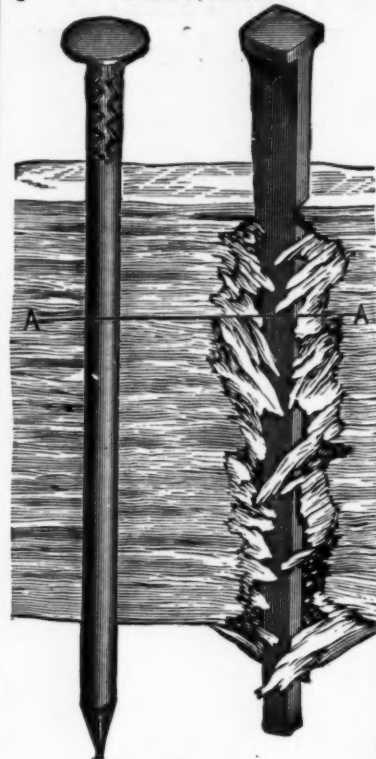
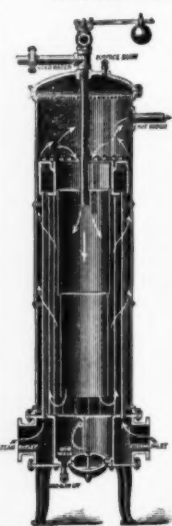
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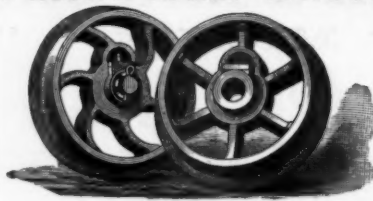
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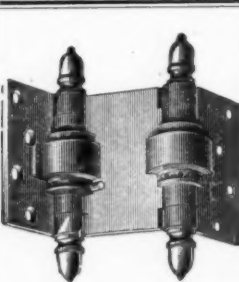
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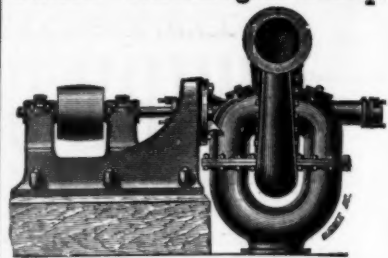
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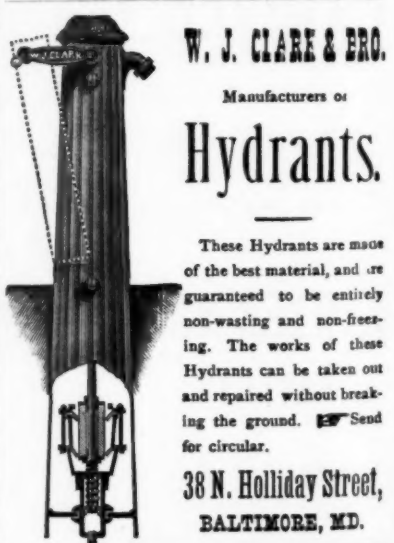
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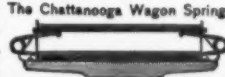
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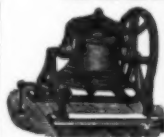
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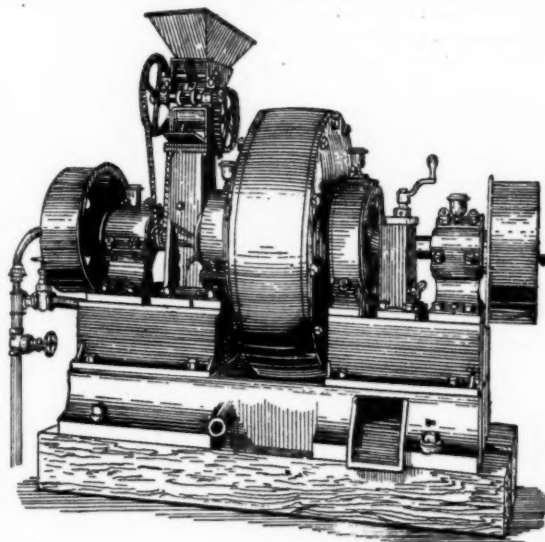
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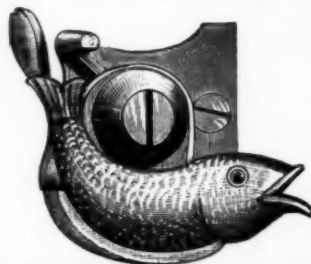
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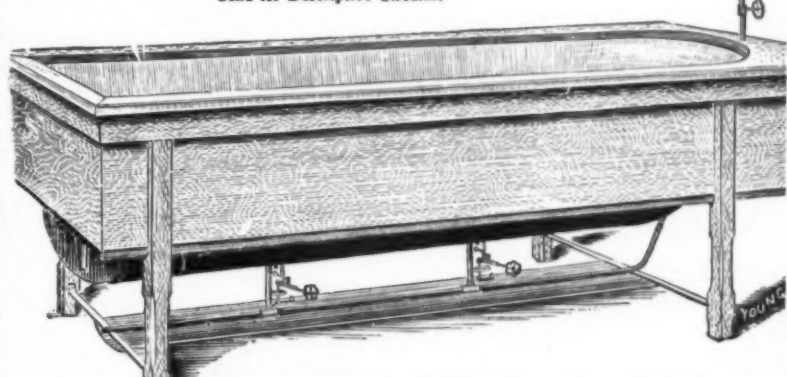
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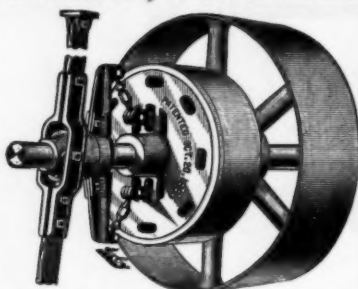


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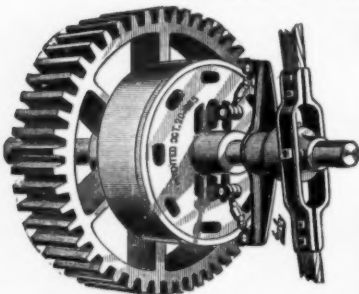
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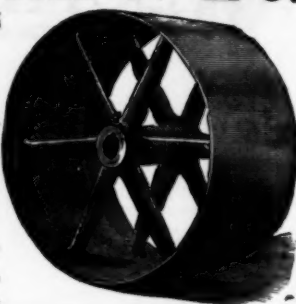
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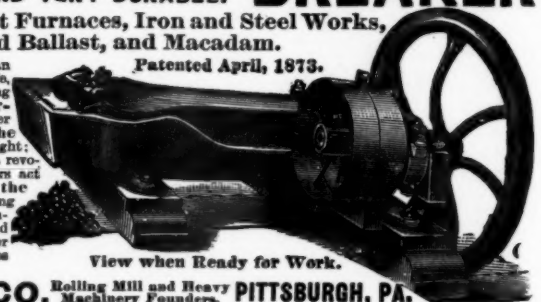
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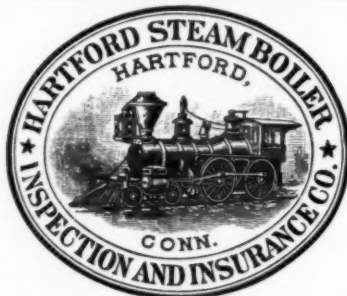
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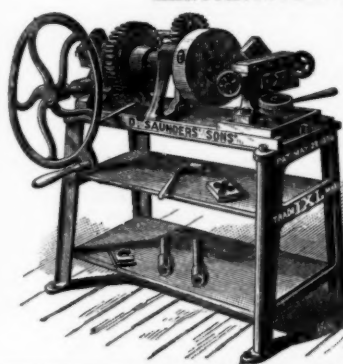


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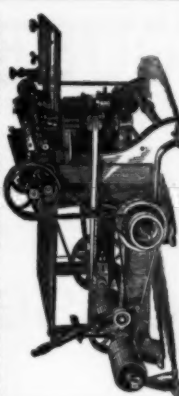
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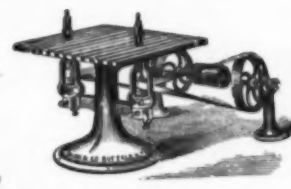
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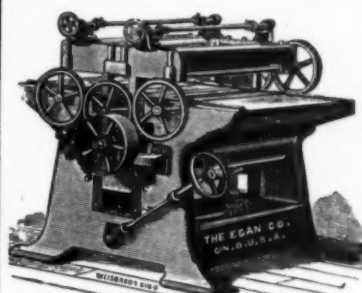
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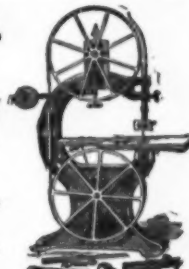
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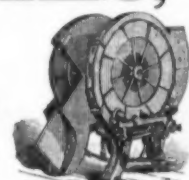
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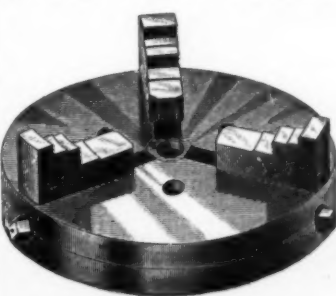
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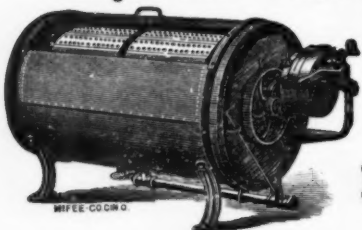
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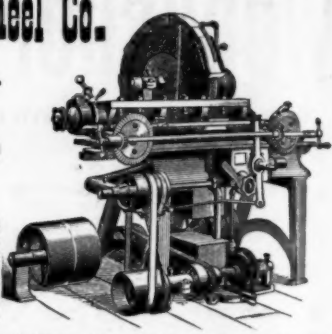
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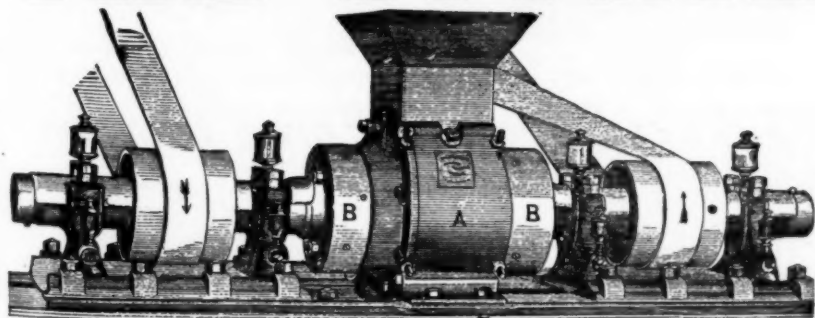
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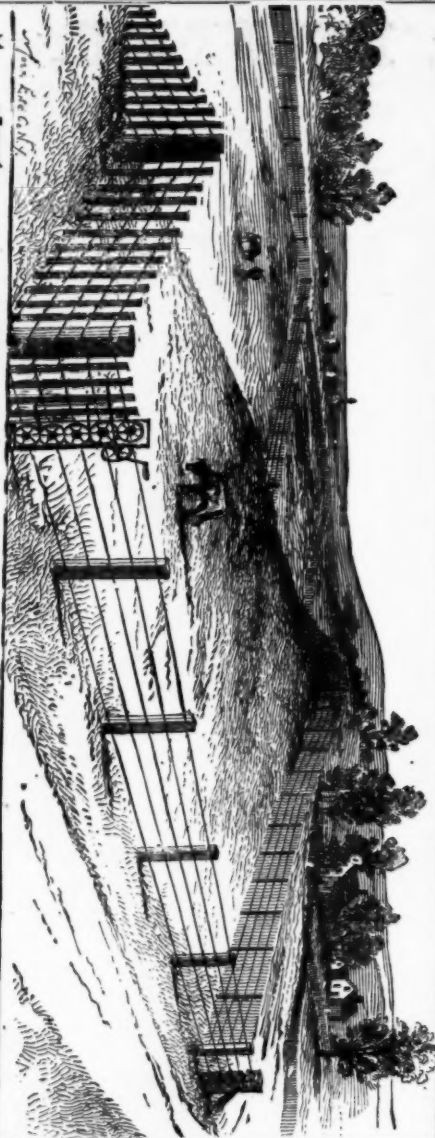
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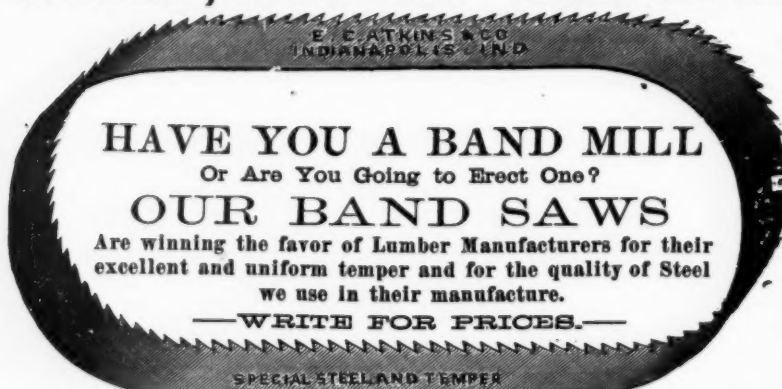
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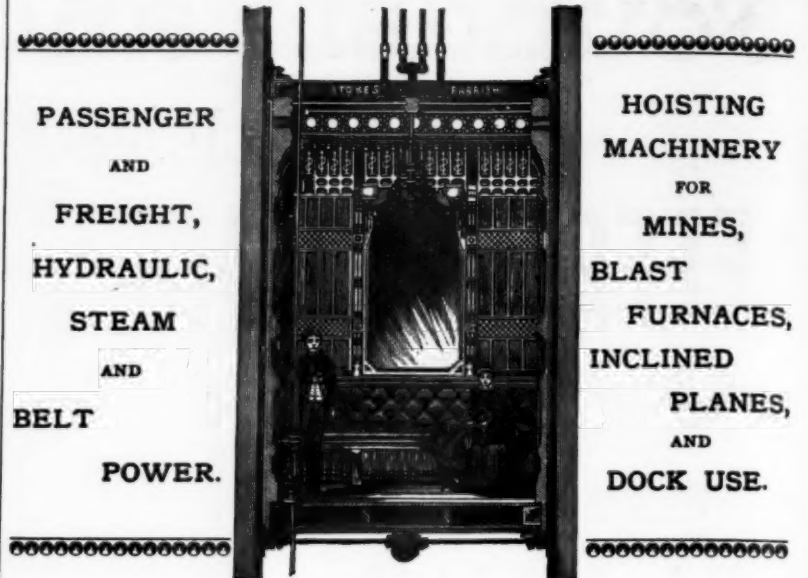
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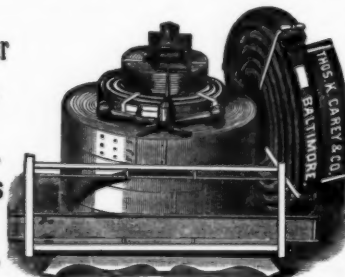
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